



**EMC Test Report
Application for Grant of Equipment Authorization
pursuant to
Industry Canada RSS-Gen Issue 2 / RSS 210 Issue 7
FCC Part 15 Subpart C**

Model: MVP-9000i

IC CERTIFICATION #: 5078B-MVP9
FCC ID: CWU-MVP9

APPLICANT: AMX
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Richardson, TX 75080

TEST SITE(S): Elliott Laboratories
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Fremont, CA. 94538-2435

IC SITE REGISTRATION #: 2845B-3; 2845B-4, 2845B-5, 2845B-7

REPORT DATE: September 28, 2010

FINAL TEST DATES: August 13, 17, 18, 19, 20, 21, 24, 25, 26, 30,
and September 1, 2, 2010

AUTHORIZED SIGNATORY:

A handwritten signature in blue ink that reads "Mark Briggs".

Mark Briggs
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Testing Cert #2016.01

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REVISION HISTORY

Rev#	Date	Comments	Modified By
-	09-21-2010	First release	
1	09-28-2010	Corrected result for worst case emissions in the 2.4GHz band in the results table on page 6 based on revised test data (Annex B).	Briggs

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SCOPE

An electromagnetic emissions test has been performed on the AMX model MVP-9000i, pursuant to the following rules:

Industry Canada RSS-Gen Issue 2

RSS 210 Issue 7 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment"

FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003

FCC DTS Measurement Procedure KDB558074, March 2005

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of AMX model MVP-9000i complied with the requirements of the following regulations:

Industry Canada RSS-Gen Issue 2
RSS 210 Issue 7 “Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment”
FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of AMX model MVP-9000i and therefore apply only to the tested sample. The sample was selected and prepared by Heath Sharp of AMX.

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY**DIGITAL TRANSMISSION SYSTEMS (2400 – 2483.5MHz)**

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses OFDM / DSSS techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	Minimum 6dB Bandwidth	12 MHz	>500kHz	Complies
15.247 (b)	RSS 210 A8.2 (4)	Output Power b-mode	802.11b: 13.2 dBm (0.021 W) 802.11g: 14.8 dBm (0.030 W) EIRP = 0.095 W ^{Note 1}	1Watt, reduced by 1dB for every 3dB that the antenna gain exceeds 6dBi	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	-11.0 dBm / 3kHz	8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions 30MHz – 25 GHz	All emissions below -30dBc	< -30dBc ^{Note 2}	Complies
15.247(c) / 15.209	RSS 210 A8.5	Radiated Spurious Emissions 30MHz – 25 GHz	50.6dB μ V/m @ 2390.0MHz	15.207 in restricted bands, all others <-30dBc ^{Note 2}	Complies (-3.4dB) ^{Note 3}

Note 1: EIRP calculated using antenna gain of 5 dBi for the highest EIRP system.
Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst).
Note 3: All emissions below 1GHz were evaluated against the requirements for a digital device. No emissions below 1GHz could be attributed to the transceiver circuitry.

DIGITAL TRANSMISSION SYSTEMS (5725 –5850 MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Systems uses OFDM / DSSS techniques	System must utilize a digital transmission technology	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	16.3 MHz	>500kHz	Complies
15.247 (b)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	10.9 dBm (0.012Watts) ^{Note 1} EIRP = 0.039 W	1Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density	2.2 dBm / 3kHz	Maximum permitted is 8dBm/3kHz	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	All emissions below -30dBc	< -30dBc ^{Note 2}	Complies
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	40.1dB μ V/m @ 11650 MHz	15.207 in restricted bands, all others <-30dBc ^{Note 2}	Complies (-13.9dB) ^{Note 3}

Note 1: EIRP calculated using antenna gain of 5 dBi for the highest EIRP system.
Note 2: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst).
Note 3: All emissions below 1GHz were evaluated against the requirements for a digital device. No emissions below 1GHz could be attributed to the transceiver circuitry.

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Antenna is integral to device.	Antenna is integral to device or uses a unique connector.	Complies
15.109	RSS GEN 7.2.3 Table 1	Receiver spurious emissions	43.9dB μ V/m @ 1465.5MHz	Refer to page 19	Complies (-10.1dB) Note 1
15.207	RSS GEN Table 2	AC Conducted Emissions	39.8dB μ V @ 3.621MHz	Refer to page 18	Complies (-6.2dB)
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to SAR report and RSS 102 declaration	Refer to OET 65, FCC Part 1 and RSS 102	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Refer to pages 4 and 18 of user's manual	Statement required regarding non-interference	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Not applicable, antennas are not detachable	Statement for products with detachable antenna	Complies
-	RSP 100 RSS GEN 4.4.1	99% Bandwidth	802.11b: 16000kHz 802.11g: 17100kHz 802.11a: 16900kHz	Information only	N/A

Note 1: All emissions below 1GHz were evaluated against the requirements for a digital device. No emissions below 1GHz could be attributed to the transceiver circuitry.

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Measurement Unit	Frequency Range	Expanded Uncertainty
RF power, conducted (power meter)	dBm	25 to 7000 MHz	± 0.52 dB
RF power, conducted (Spectrum analyzer)	dBm	25 to 7000 MHz	± 0.7 dB
Conducted emission of transmitter	dBm	25 to 26500 MHz	± 0.7 dB
Conducted emission of receiver	dBm	25 to 26500 MHz	± 0.7 dB
Radiated emission (substitution method)	dBm	25 to 26500 MHz	± 2.5 dB
Radiated emission (field strength)	dB μ V/m	25 to 1000 MHz	± 3.6 dB
		1000 to 40000 MHz	± 6.0 dB
Conducted Emissions (AC Power)	dB μ V	0.15 to 30 MHz	± 2.4 dB

EQUIPMENT UNDER TEST (EUT) DETAILS**GENERAL**

The AMX model MVP-9000i is a flat screen display with various functions. It has an 802.11abg wireless interface (2400-2483.5 MHz, 5150-5250 MHz and 5725-5850MHz) which supports antenna diversity for both transmit and receive (different antennas on each antenna port but both antennas have a maximum gain of 5dBi in all three bands). The device can be used stand-alone or in a docking unit. The device has a mini-USB slot (for firmware updates) and a micro sd card slot. The electrical rating of the EUT is 12VDC, 4.0 Amps.

There are two docking stations, one is a table-stand and the other is wall-mounted. The docking stations, which are both powered via Power-Over-Ethernet (POE) provide additional USB interfaces for keyboard, mouse or memory cards. Although the docking stations would use the wired ethernet interface as the primary communications interface the MVP-9000i's wireless interface remains active to allow for immediate operation on removal from the docking station. The docking station comes with a short ethernet cable and instructions that this cable has to be used to connect to the PoE adapter.

In the docking station the device is fixed in orientation. Outside of the docking station the device would primarily be used in a standing orientation (an integral stand holds the device on a table top at a slight angle), however it could also be used held on a person's lap. The EUT was therefore tested for radiated emissions in three configurations – on its own, flat on the table top (to simulate laptop use); standing in the table-mount (angled at the same angle as when the device is used stand-alone); and in a fully upright position in the wall dock.

The sample was received on August 13, 2010 and tested on August 13, 17, 18, 19, 20, 21, 24, 25, 26, 30, and September 1, 2, 2010. The EUT consisted of the following component(s):

Company	Model	Description	Serial Number	FCC ID
AMX LLC	MVP-9000i	Modero ViewPoint Touch Panel with Intercom	N/A	CWU-MVP9

ANTENNA SYSTEM

The EUT has 2 antennas which provide spatial diversity (only one antenna is active at a time). The two antennas are integrated into the system, thereby meeting the requirements of FCC 15.203.

ENCLOSURE

The EUT enclosure is primarily constructed of plastic. It measures approximately 19.35 cm wide by 27.89 cm deep by 2.69 cm high.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at Elliott.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Company	Model	Description	Serial Number	FCC ID
Dell	PP07L	Laptop PC	217901V0740006	DoC
AMX	MVP-TDS-9	Table Dock Station	-	N/A
AMX	MVP-WDS-9	Wall Docking Station	-	N/A

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

Stand Alone

Port	Connected To	Description	Cable(s)	
			Shielded or Unshielded	Length(m)
EUT Mini-USB	Laptop Computer	Multi-wire	Shielded with ferrite beaded	1.8
Adapter AC Power	AC Mains	3 wire	-	-
EUT DC Power	AC-DC adapter	-	-	-

With Wall or Table Dock

Port	Connected To	Description	Cable(s)	
			Shielded or Unshielded	Length(m)
Mini-USB	Laptop Computer	Multi-wire	Shielded and Beaded	1.8
Ethernet on Dock station	PoE Injector	CAT-5	Unshielded	3
PoE injector AC Power	AC Source	3 wire	Unshielded	1

Note – mini USB port was not accessible when device was installed in the wall dock. The device was configured for the appropriate test mode (power level, channel, 802.11a, b or g) via the mini-USB interface outside the dock then the cable was removed and the device was installed inside the dock for the measurements.

EUT OPERATION

The EUT was operated via a test utility on the laptop that placed the device into a continuous transmit or receive mode on the appropriate operating channel. The data rates were 1Mb/s for 802.11b mode and 6Mb/s for 802.11a and 802.11g modes as these were the worst case (highest power) data rates in each mode. Both aux and main antennas were evaluated.

The device can be used in a stand-alone configuration or installed into docking stations. In stand-alone mode it would typically be used in a standing orientation (slightly angled) using its internal stand, but it could also be used flat, such as on someone's lap. The flat orientation was evaluated with the device in stand-alone configuration (i.e. not installed in a docking unit) for both radiated emissions and AC conducted emissions. The vertical orientation was evaluated for radiated spurious emissions with the device in both the wall dock (fully vertical) and in the table dock (at a similar angle to that created if using the internal stand). For all radiated emissions evaluations of the transceiver the laptop PC used to control the device was located beneath the test table.

TEST SITE**GENERAL INFORMATION**

Final test measurements were taken at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission and with industry Canada.

Site	Registration Numbers		Location
	FCC	Canada	
Chamber 3	769238	2845B-3	41039 Boyce Road Fremont, CA 94538-2435
Chamber 4	211948	2845B-4	
Chamber 5	211948	2845B-5	
Chamber 7	211948	2845B-7	

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a non-conductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 specifies that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

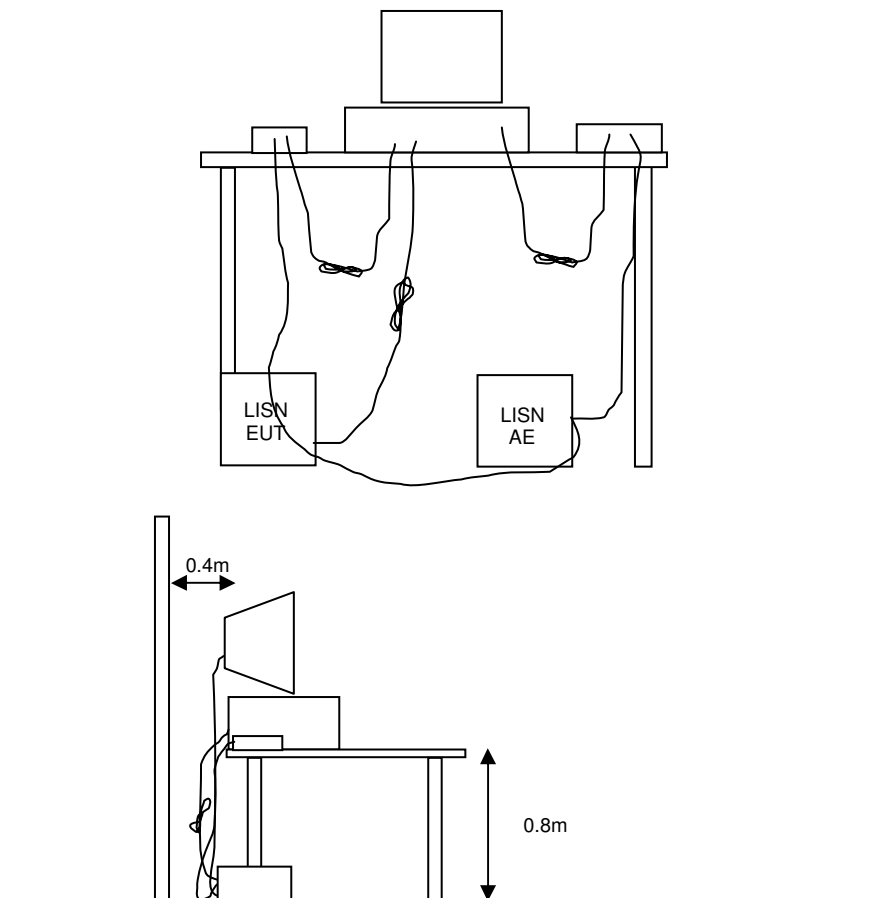
TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.



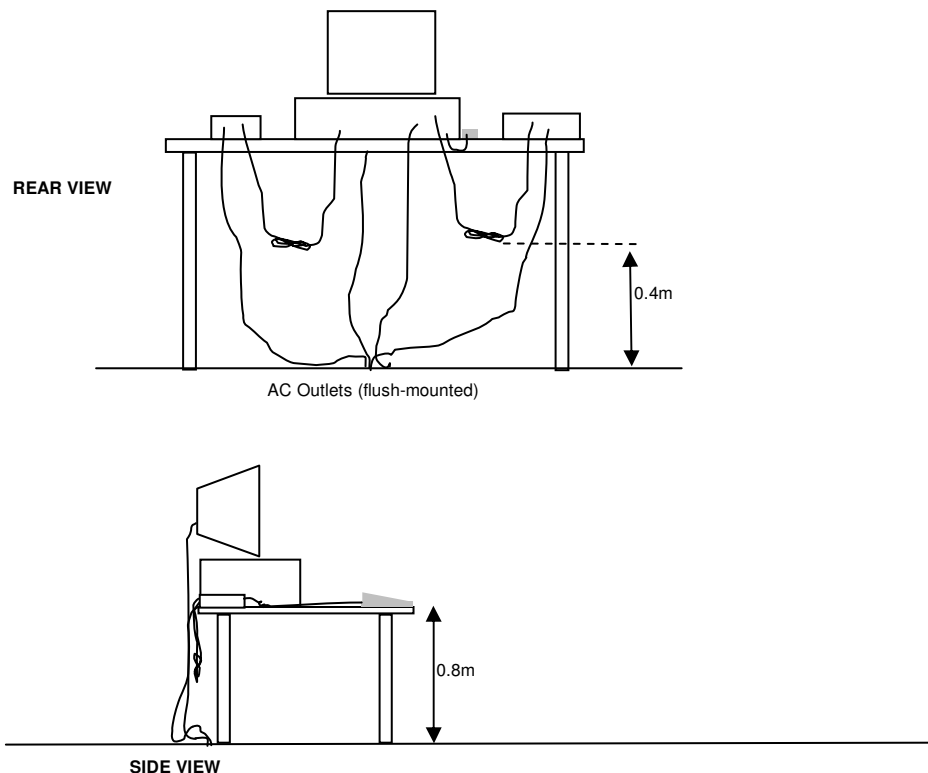
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

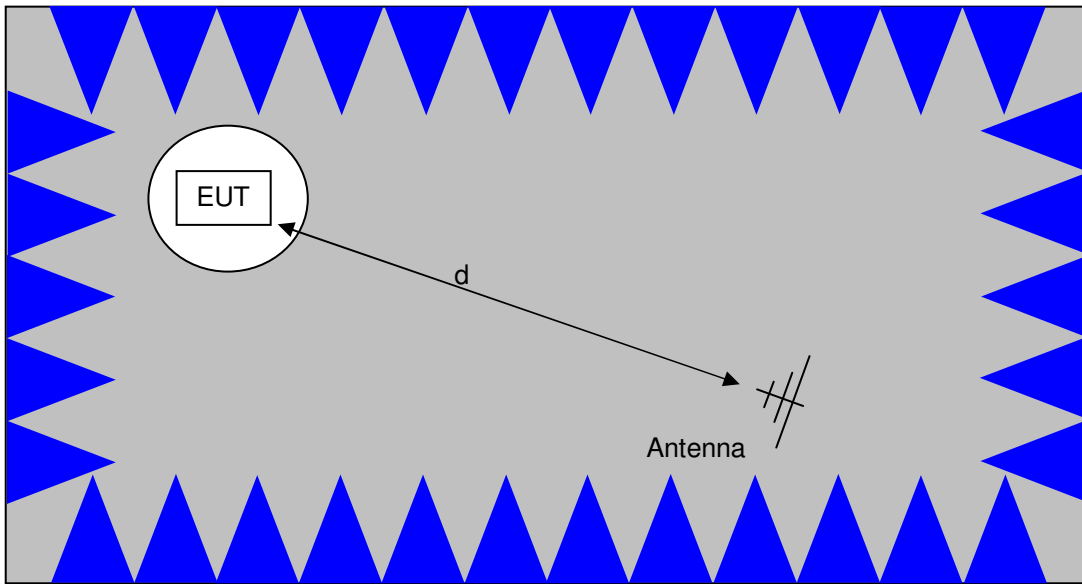
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1 meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.

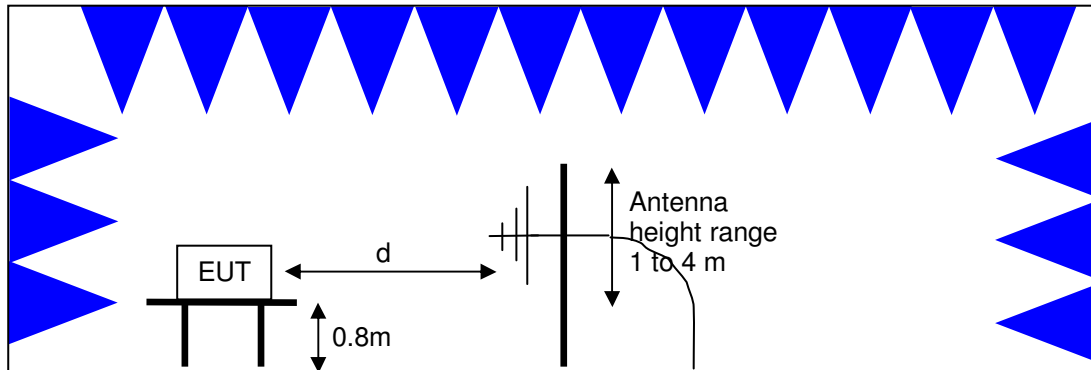


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

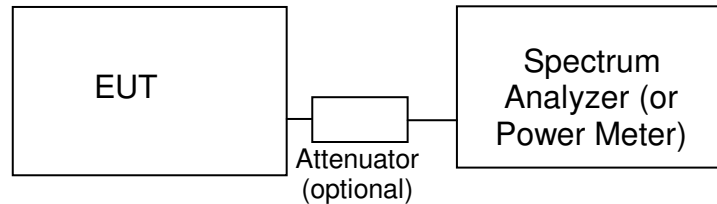
Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



Test Configuration for Radiated Field Strength Measurements
Semi-Anechoic Chamber, Plan and Side Views

CONDUCTED EMISSIONS FROM ANTENNA PORT

Direct measurements of power, bandwidth and power spectral density are performed, where possible, with the antenna port of the EUT connected to either the power meter or spectrum analyzer via a suitable attenuator and/or filter. These are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission.

Test Configuration for Antenna Port Measurements

Measurement bandwidths (video and resolution) are set in accordance with the relevant standards and Elliott's test procedures for the type of radio being tested. When power measurements are made using a resolution bandwidth less than the signal bandwidth the power is calculated by summing the power across the signal bandwidth using either the analyzer channel power function or by capturing the trace data and calculating the power using software. In both cases the summed power is corrected to account for the equivalent noise bandwidth (ENBW) of the resolution bandwidth used.

If power averaging is used (typically for certain digital modulation techniques), the EUT is configured to transmit continuously. Power averaging is performed using either the built-in function of the analyzer or, if the analyzer does not feature power averaging, using external software. In both cases the average power is calculated over a number of sweeps (typically 100). When the EUT cannot be configured to continuously transmit then either the analyzer is configured to perform a gated sweep to ensure that the power is averaged over periods that the device is transmitting or power averaging is disabled and a max-hold feature is used.

If a power meter is used to make output power measurements the sensor head type (peak or average) is stated in the test data table.

BANDWIDTH MEASUREMENTS

The 6dB, 20dB and/or 26dB signal bandwidth is measured in using the bandwidths recommended by ANSI C63.4. When required, the 99% bandwidth is measured using the methods detailed in RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

CONDUCTED EMISSIONS SPECIFICATION LIMITS: FCC 15.207; FCC 15.107(a), RSS GEN

The table below shows the limits for the emissions on the AC power line from an intentional radiator and a receiver.

Frequency (MHz)	Average Limit (dBuV)	Quasi Peak Limit (dBuV)
0.150 to 0.500	Linear decrease on logarithmic frequency axis between 56.0 and 46.0	Linear decrease on logarithmic frequency axis between 66.0 and 56.0
0.500 to 5.000	46.0	56.0
5.000 to 30.000	50.0	60.0

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands¹ (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	2400/F _{KHz} @ 300m	67.6-20*log ₁₀ (F _{KHz}) @ 300m
0.490-1.705	24000/F _{KHz} @ 30m	87.6-20*log ₁₀ (F _{KHz}) @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

¹ The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

OUTPUT POWER LIMITS – DIGITAL TRANSMISSION SYSTEMS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 – 928	1 Watt (30 dBm)	8 dBm/3kHz
2400 – 2483.5	1 Watt (30 dBm)	8 dBm/3kHz
5725 – 5850	1 Watt (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 – 5850 MHz band are not subject to this restriction.

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS 210. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:

R_r = Receiver Reading in dBuV

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20 * \text{LOG}_{10} (D_m/D_s)$$

where:

$$F_d = \text{Distance Factor in dB}$$

$$D_m = \text{Measurement Distance in meters}$$

$$D_s = \text{Specification Distance in meters}$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

$$M = R_c - L_s$$

where:

$$R_r = \text{Receiver Reading in dBuV/m}$$

$$F_d = \text{Distance Factor in dB}$$

$$R_c = \text{Corrected Reading in dBuV/m}$$

$$L_s = \text{Specification Limit in dBuV/m}$$

$$M = \text{Margin in dB Relative to Spec}$$

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of d (meters) from the equipment under test:

$$E = \frac{1000000 \sqrt{30 P}}{d} \quad \text{microvolts per meter}$$

where P is the eirp (Watts)

For a measurement at 3m the conversion from a logarithmic value for field strength (dBuV/m) to an eirp power (dBm) is -95.3dB.

Appendix A Test Equipment Calibration Data**Radiated Emissions**

<u>Manufacturer</u>	<u>Description</u>	<u>Model</u>	<u>Asset #</u>	<u>Cal Due</u>
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	12/15/2010
EMCO	Antenna, Horn, 1-18 GHz	3115	487	7/6/2012
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	785	5/26/2011
EMCO	Antenna, Horn, 1-18GHz	3115	868	6/8/2012
Hewlett Packard	Head (Inc W1-W4, 1143, 2198) Red	84125C	1145	1/13/2011
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	9/2/2010
Hewlett Packard	High Pass filter, 3.5 GHz (Blu System)	P/N 84300-80038 (84125C)	1391	6/18/2011
Hewlett Packard	High Pass filter, 8.2 GHz (Blu System)	P/N 84300-80039 (84125C)	1392	5/17/2011
Hewlett Packard	SpecAn 9 kHz - 40 GHz, FT (SA40) Blue	8564E (84125C)	1393	4/14/2011
EMCO	Antenna, Horn, 1-18 GHz	3115	1561	6/22/2012
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702-02	1683	8/10/2011
A.H. Systems	Spare System Horn, 18-40GHz	SAS-574, p/n: 2581	2162	1/19/2011

Radio Antenna Port (Power and Spurious Emissions), 01 & 02-Sep-10

<u>Manufacturer</u>	<u>Description</u>	<u>Model</u>	<u>Asset #</u>	<u>Cal Due</u>
Agilent	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	1/6/2011
Rohde & Schwarz	Power Meter, Single Channel	NRVS	1290	10/22/2010
Rohde & Schwarz	Power Sensor 100 uW - 10 Watts	NRV-Z53	1555	2/5/2011
Rohde & Schwarz	Attenuator, 20 dB , 50 ohm, 10W, DC-18 GHz	20dB, 10W, Type N	1556	2/5/2011

Conducted Emissions - AC Power Ports, 22-Aug-10

<u>Manufacturer</u>	<u>Description</u>	<u>Model</u>	<u>Asset #</u>	<u>Cal Due</u>
Solar Electronics	LISN	8028-50-TS-24-BNC support	904	3/2/2011
Rohde & Schwarz	Pulse Limiter	ESH3 Z2	1401	4/20/2011
Fischer Custom Comm.	LISN, 50uH, 25 Amps, Dual Line	FCC-LISN-50/250-25-2-01	1575	4/19/2011
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB7	1756	3/16/2011

Appendix B Test Data

T80241 92 Pages
T80309 (AC conducted emissions) 11 Pages



EMC Test Data

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
Contact:		Account Manager:	Christine Krebill
	Heath Sharp		-
Emissions Standard(s):	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	B
Immunity Standard(s):	-	Environment:	-

EMC Test Data

For The

AMX

Model

MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station

Date of Last Test: 9/7/2010

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions - 2.4GHz Band Edge

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Note - power setting is the software setting in the test utility and is recorded for reference only.

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
802.11b mode, EUT flat on table							
1	802.11b EUT Flat	#1 2412 MHz	18	1	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	45.9dBµV/m @ 2385.6MHz (-8.1dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	46.2dBµV/m @ 2497.9MHz (-7.8dB)
		#1 2412 MHz	18	2	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	44.8dBµV/m @ 2383.8MHz (-9.2dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	46.2dBµV/m @ 2495.2MHz (-7.8dB)
802.11b mode, EUT in angled/upright position in table dock (representative of EUT standing on table with integral stand)							
2	802.11b EUT in table dock	#1 2412 MHz	18	1	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	45.0dBµV/m @ 2389.8MHz (-9.0dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	46.1dBµV/m @ 2494.9MHz (-7.9dB)
		#1 2412 MHz	18	2	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	45.0dBµV/m @ 2389.7MHz (-9.0dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	46.2dBµV/m @ 2497.0MHz (-7.8dB)
802.11b mode, EUT fully upright position in wall dock (to evaluate wall dock's effect on panel's antennas)							
3	802.11b EUT in wall dock	#1 2412 MHz	18	1	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	47.8dBµV/m @ 2389.2MHz (-6.2dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	48.1dBµV/m @ 2497.3MHz (-5.9dB)
		#1 2412 MHz	18	2	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	47.4dBµV/m @ 2353.9MHz (-6.6dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	46.1dBµV/m @ 2497.0MHz (-7.9dB)
802.11g mode, EUT in orientation with worst case margin							
4	802.11g EUT in wall coc	#1 2412 MHz	18	1	Radiated Spurious - Band Edge 2390MHz	15.209 / RSS 210	50.6dBµV/m @ 2390.0MHz (-3.4dB)
		#11 2462 MHz	18		Radiated Spurious - Band Edge 2483.5MHz	15.209 / RSS 210	48.1dBµV/m @ 2486.8MHz (-5.9dB)

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.
For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 22-23 °C
Rel. Humidity: 37-41 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1: 2.4GHz Band Edge Radiated Spurious Emissions - Operating Mode: 802.11b, EUT Flat

Date of Test: 8/13/2010

Test Engineer: Suresh Kondapalli

Test Location: Chamber #3

Run #1a: 802.11b, Antenna 1, Channel 1 (2412MHz) EUT Flat on Table

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
2410.400	89.0	V	-	-	Pk	291	1.5	RB 100 kHz;VB 100 kHz;Pk
2413.900	89.2	V	-	-	AVG	291	1.5	RB 1 MHz;VB 10 Hz;Pk
2413.130	92.6	V	-	-	PK	291	1.5	RB 1 MHz;VB 3 MHz;Pk
2412.830	85.3	H	-	-	Pk	141	1.4	RB 100 kHz;VB 100 kHz;Pk
2413.870	85.5	H	-	-	AVG	349	2.3	RB 1 MHz;VB 10 Hz;Pk
2413.170	88.7	H	-	-	PK	349	2.3	RB 1 MHz;VB 3 MHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
2385.600	45.9	H	54.0	-8.1	AVG	255	1.1	RB 1 MHz;VB 10 Hz;Pk
2390.000	45.6	V	54.0	-8.6	AVG	282	1.1	RB 1 MHz;VB 10 Hz;Pk
2387.070	44.9	V	54.0	-9.1	AVG	204	1.2	RB 1 MHz;VB 10 Hz;Pk
2390.000	56.7	V	74.0	-13.3	PK	282	1.1	RB 1 MHz;VB 3 MHz;Pk
2380.330	56.5	V	74.0	-17.5	PK	204	1.2	RB 1 MHz;VB 3 MHz;Pk
2389.000	56.5	H	74.0	-17.5	PK	255	1.1	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1b: 802.11b, Antenna 1, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.470	85.3	V	-	-	Pk	65	2.1	RB 100 kHz;VB 100 kHz;Pk
2463.930	89.1	V	-	-	AVG	68	2.1	RB 1 MHz;VB 10 Hz;Pk
2461.200	92.4	V	-	-	PK	68	2.1	RB 1 MHz;VB 3 MHz;Pk
2461.270	83.0	H	-	-	Pk	161	1.3	RB 100 kHz;VB 100 kHz;Pk
2460.750	83.0	H	-	-	AVG	65	2.1	RB 1 MHz;VB 10 Hz;Pk
2461.040	86.4	H	-	-	PK	65	2.1	RB 1 MHz;VB 3 MHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2497.850	46.2	H	54.0	-7.8	AVG	245	1.3	RB 1 MHz;VB 10 Hz;Pk
2496.530	46.1	V	54.0	-7.9	AVG	152	1.0	RB 1 MHz;VB 10 Hz;Pk
2486.280	58.0	H	74.0	-16.0	PK	245	1.3	RB 1 MHz;VB 3 MHz;Pk
2497.990	57.4	V	74.0	-16.6	PK	152	1.0	RB 1 MHz;VB 3 MHz;Pk

Run #1c: 802.11b, Antenna 2, Channel 1 (2412MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2413.440	89.5	V	-	-	AVG	287	1.0	RB 1 MHz;VB 10 Hz;Pk
2413.060	92.6	V	-	-	PK	287	1.0	100Khz/100KHz
2412.830	88.9	H	-	-	AVG	149	1.7	RB 1 MHz;VB 10 Hz;Pk
2412.970	92.0	H	-	-	PK	149	1.7	100Khz/100KHz

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2383.800	44.8	V	54.0	-9.2	AVG	152	1.0	RB 1 MHz;VB 10 Hz;Pk
2383.000	44.7	H	54.0	-9.3	AVG	104	1.4	RB 1 MHz;VB 10 Hz;Pk
2383.600	56.3	V	74.0	-17.7	PK	152	1.0	RB 1 MHz;VB 3 MHz;Pk
2360.470	55.7	H	74.0	-18.3	PK	104	1.4	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1d: 802.11b, Antenna 2, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2463.900	85.5	H	-	-	AVG	184	2.0	RB 1 MHz;VB 10 Hz;Pk
2463.130	88.8	H	-	-	PK	184	2.0	RB100KHz;VB100KHz
2463.900	88.7	V	-	-	AVG	64	1.4	RB 1 MHz;VB 10 Hz;Pk
2461.500	86.4	V	-	-	PK	108	1.5	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2495.190	46.2	H	54.0	-7.8	AVG	266	1.9	RB 1 MHz;VB 10 Hz;Pk
2498.070	46.0	V	54.0	-8.0	AVG	250	2.0	RB 1 MHz;VB 10 Hz;Pk
2492.490	57.5	V	74.0	-16.5	PK	250	2.0	RB 1 MHz;VB 3 MHz;Pk
2498.180	57.1	H	74.0	-16.9	PK	266	1.9	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: 2.4Ghz Band Edge Radiated Spurious Emissions - Operating Mode: 802.11b, EUT in Table Dock

Run #2a: 802.11b, Antenna 1, Channel 1 (2412MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2412.870	89.6	V	-	-	Pk	120	1.5	RB 100 kHz;VB 100 kHz;Pk
2413.870	91.0	H	-	-	Pk	0	1.0	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.800	45.0	H	54.0	-9.0	AVG	360	1.1	
2385.530	44.9	V	54.0	-9.1	AVG	265	1.3	
2351.730	56.6	H	74.0	-17.4	PK	360	1.1	
2381.730	56.6	V	74.0	-17.4	PK	265	1.3	

Run #2b: 802.11b, Antenna 1, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2462.870	89.1	V	-	-	Pk	150	1.0	RB 100 kHz;VB 100 kHz;Pk
2462.870	93.6	H	-	-	Pk	254	1.0	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2494.910	46.1	V	54.0	-7.9	AVG	225	1.3	RB 1 MHz;VB 10 Hz;Pk
2496.620	46.1	H	54.0	-7.9	AVG	191	1.8	RB 1 MHz;VB 10 Hz;Pk
2488.860	57.2	V	74.0	-16.8	PK	225	1.3	RB 1 MHz;VB 3 MHz;Pk
2498.650	57.1	H	74.0	-16.9	PK	191	1.8	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2c: 802.11b, Antenna 2, Channel 1 (2412MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2413.870	92.8	V	-	-	Pk	121	1.0	RB 100 kHz;VB 100 kHz;Pk
2412.870	98.1	H	-	-	Pk	250	1.0	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2389.670	45.0	H	54.0	-9.0	AVG	7	1.1	RB 1 MHz;VB 10 Hz;Pk
2387.200	44.8	V	54.0	-9.2	AVG	24	1.9	RB 1 MHz;VB 10 Hz;Pk
2361.470	56.4	H	74.0	-17.6	PK	7	1.1	RB 1 MHz;VB 3 MHz;Pk
2364.400	56.1	V	74.0	-17.9	PK	24	1.9	RB 1 MHz;VB 3 MHz;Pk

Run #2d: 802.11b, Antenna 2, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.400	93.3	V	-	-	Pk	54	1.4	RB 1 MHz;VB 1 kHz;Pk
2462.870	89.4	H	-	-	Pk	23	1.9	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2497.000	46.2	H	54.0	-7.8	AVG	70	2.3	RB 1 MHz;VB 10 Hz;Pk
2495.520	46.1	V	54.0	-7.9	AVG	132	1.5	RB 1 MHz;VB 10 Hz;Pk
2495.930	57.5	H	74.0	-16.5	PK	70	2.3	RB 1 MHz;VB 3 MHz;Pk
2491.610	57.1	V	74.0	-16.9	PK	132	1.5	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3c: 802.11b, Antenna 2, Channel 1 (2412MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2411.730	90.2	V	-	-	Pk	40	1.3	RB 100 kHz;VB 100 kHz;Pk
2412.770	98.1	H	-	-	Pk	68	1.6	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2353.870	47.4	V	54.0	-6.6	AVG	182	1.4	RB 1 MHz;VB 10 Hz;Pk
2350.470	47.3	H	54.0	-6.7	AVG	236	1.0	RB 1 MHz;VB 10 Hz;Pk
2355.470	58.9	V	74.0	-15.1	PK	182	1.4	RB 1 MHz;VB 3 MHz;Pk
2357.070	58.9	H	74.0	-15.1	PK	236	1.0	RB 1 MHz;VB 3 MHz;Pk

Run #3d: 802.11b, Antenna 2, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2461.530	86.4	V	-	-	Pk	279	1.0	RB 100 kHz;VB 100 kHz;Pk
2462.870	86.4	H	-	-	Pk	159	1.9	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2496.970	46.1	H	54.0	-7.9	AVG	196	1.4	RB 1 MHz;VB 10 Hz;Pk
2496.010	46.0	V	54.0	-8.0	AVG	35	1.6	RB 1 MHz;VB 10 Hz;Pk
2494.800	57.6	H	74.0	-16.4	PK	196	1.4	RB 1 MHz;VB 3 MHz;Pk
2499.700	56.9	V	74.0	-17.1	PK	35	1.6	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4: 2.4Ghz Band Edge Radiated Spurious Emissions - Operating Mode: 802.11g

Run #4a: 802.11g, Antenna 1, EUT in Wall Dock, Channel 1 (2412MHz)

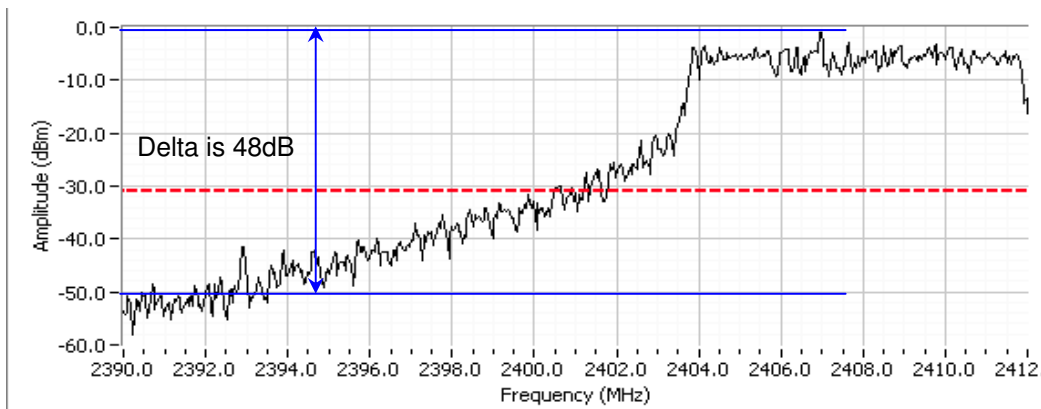
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2408.400	96.3	V	-	-	Pk	186	1.0	RB 100 kHz;VB 100 kHz;Pk
2413.500	98.8	H	-	-	Pk	254	1.0	RB 100 kHz;VB 100 kHz;Pk
2413.500	108.0	H	-	-	Pk	254	1.0	RB 1MHz; VB 10Hz; Pk
2413.500	98.6	H	-	-	Avg	254	1.0	RB 1MHz; VB 3MHz; Pk

Band Edge Signal Field Strength - Marker Delta

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2390.000	50.6	H	54.0	-3.4	AVG	186	1.0	Note 1
2390.000	60.0	H	74.0	-14.0	Peak	198	1.0	Note 1

Note 1: Calculated using marker delta method. The highest out of band emission was at the band edge. When measured using RB=100kHz, VB=100kHz the out of band signal is 48dB below the in-band signal level (see plot below). The average and peak values at the band edge were calculated by subtracting this delta from the in-band signal levels measured above.



Run #4b: 802.11g, Antenna 1, EUT in Wall Dock, Channel 11 (2462MHz)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2460.900	91.0	V			Pk	188	1.2	RB 100 kHz;VB 100 kHz;Pk

Band Edge Signal Field Strength - Direct measurement of field strength

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2486.830	48.1	H	54.0	-5.9	AVG	274	1.2	RB 1 MHz;VB 10 Hz;Pk
2496.400	48.0	V	54.0	-6.0	AVG	166	1.8	RB 1 MHz;VB 10 Hz;Pk
2495.540	59.9	V	74.0	-14.1	PK	166	1.8	RB 1 MHz;VB 3 MHz;Pk
2487.760	59.2	H	74.0	-14.8	PK	274	1.2	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions, 1 - 26GHz (802.11bg)

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
EUT flat on table							
1a	802.11b	2437MHz (#6)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	39.4dBµV/m @ 1064.7MHz (-14.6dB)
1b			18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	39.7dBµV/m @ 1062.7MHz (-14.3dB)
1c	802.11g	2437MHz (#6)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	42.0dBµV/m @ 1065.5MHz (-12.0dB)
1d			18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	36.0dBµV/m @ 1063.1MHz (-18.0dB)
EUT in angled/upright position in table dock							
2a	802.11b	2437MHz (#6)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	46.8dBµV/m @ 4874.0MHz (-7.2dB)
2b			18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	46.4dBµV/m @ 4874.1MHz (-7.6dB)
2c	802.11g	2437MHz (#6)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	39.7dBµV/m @ 1063.7MHz (-14.3dB)
2d			18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	41.3dBµV/m @ 1326.9MHz (-12.7dB)
EUT fully upright position in wall dock (to evaluate wall dock's effect on panel's antennas)							
3a	802.11b	2437MHz (#6)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	34.6dBµV/m @ 4849.5MHz (-19.4dB)
3b	802.11g		18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	37.5dBµV/m @ 4863.4MHz (-16.5dB)
4a	802.11g	2412 MHz (#1)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	36.2dBµV/m @ 1059.5MHz (-17.8dB)
4b		2422 MHz (#11)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	29.8dBµV/m @ 1049.1MHz (-24.2dB)
EUT in worst case configuration (table dock) and worst case mode (802.11b), top and bottom channels							
5a	802.11b	2412 MHz (#1)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	34.2dBµV/m @ 1126.0MHz (-19.8dB)
5b		2422 MHz (#11)	18	1	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	30.6dBµV/m @ 4807.0MHz (-23.4dB)
5c		2412 MHz (#1)	18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	28.9dBµV/m @ 1461.9MHz (-25.1dB)
5d		2422 MHz (#11)	18	2	Radiated Emissions, 1 - 26 GHz	FCC Part 15.209 / 15.247(c)	31.8dBµV/m @ 1062.4MHz (-22.2dB)

Note: Frequency 10 to 26GHz was scanned in all modes no emissions were found above noise floor

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 23 °C
 Rel. Humidity: 42 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1: Radiated Spurious Emissions, 1-26GHz Operating Mode: 802.11bg modes, EUT Flat on table

Date of Test: 8/18/2010

Test Engineer: Suresh Kondapalli

Test Location: FT Chamber #5

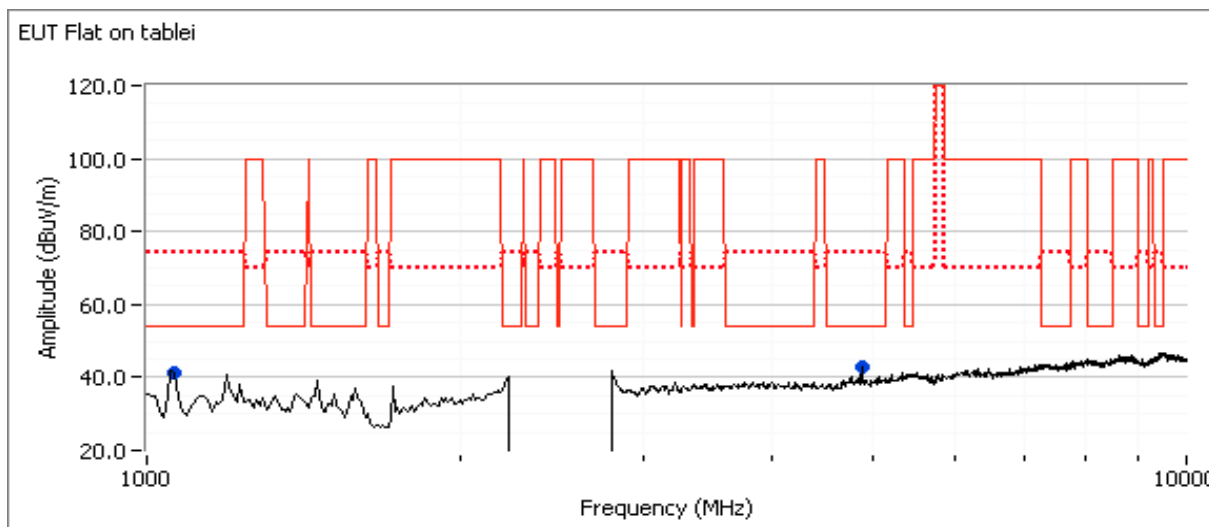
Run #1a: Channel 6, 2437MHz, 802.11b, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2435.700	91.8	V	-	-	Pk	157	1.2	RB 100 kHz;VB 100 kHz;Pk
2438.770	86.8	H	-	-	Pk	1	1.1	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	91.8	dB μ V/m
Limit for emissions outside of restricted bands:	61.8	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1064.650	39.4	V	54.0	-14.6	AVG	208	1.1	RB 1 MHz;VB 10 Hz;Pk
4874.120	36.7	V	54.0	-17.3	AVG	352	1.3	RB 1 MHz;VB 10 Hz;Pk
1063.400	48.5	V	74.0	-25.5	PK	208	1.1	RB 1 MHz;VB 3 MHz;Pk
4874.020	47.0	V	74.0	-27.0	PK	352	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

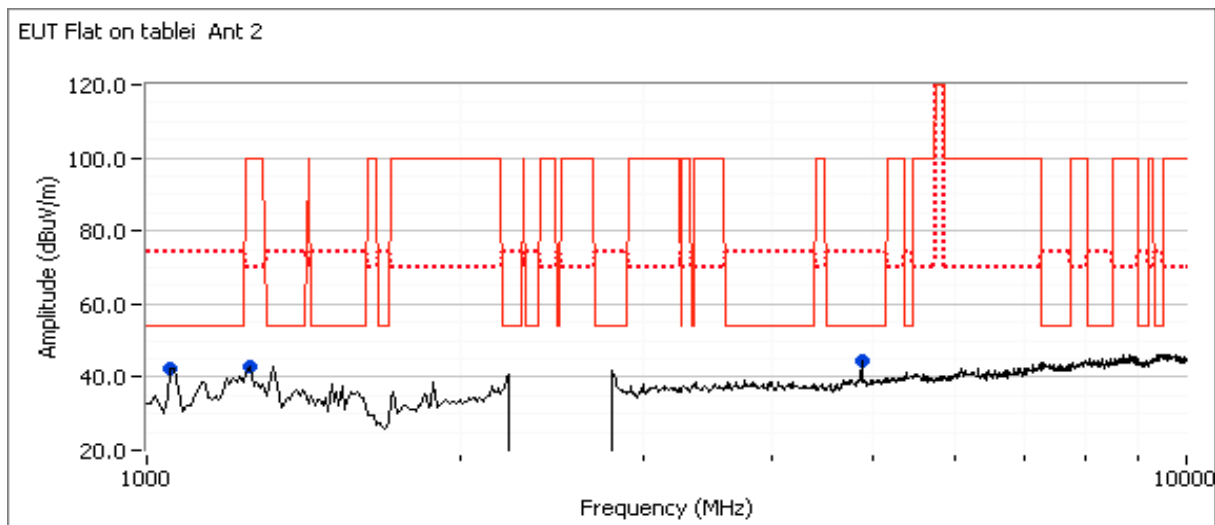
Run #1b: Channel 6, 2437MHz, 802.11b, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2439.800	88.9	H	-	-	Pk	336	2.1	RB 100 kHz;VB 100 kHz;Pk
2435.700	89.6	V	-	-	Pk	268	1.5	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in **100kHz RBW:** 89.6 dBμV/m

Limit for emissions outside of restricted bands: 59.6 dBμV/m Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dBμV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1062.680	39.7	V	54.0	-14.3	AVG	287	1.3	RB 1 MHz;VB 10 Hz;Pk
4859.900	34.4	V	54.0	-19.6	AVG	356	1.9	RB 1 MHz;VB 10 Hz;Pk
1252.140	49.2	V	70.0	-20.8	PK	236	1.2	RB 1 MHz;VB 3 MHz;Pk
1061.590	53.1	V	74.0	-20.9	PK	287	1.3	RB 1 MHz;VB 3 MHz;Pk
1251.920	37.7	V	59.6	-21.9	AVG	236	1.2	RB 1 MHz;VB 10 Hz;Pk
4860.560	46.0	V	74.0	-28.0	PK	356	1.9	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

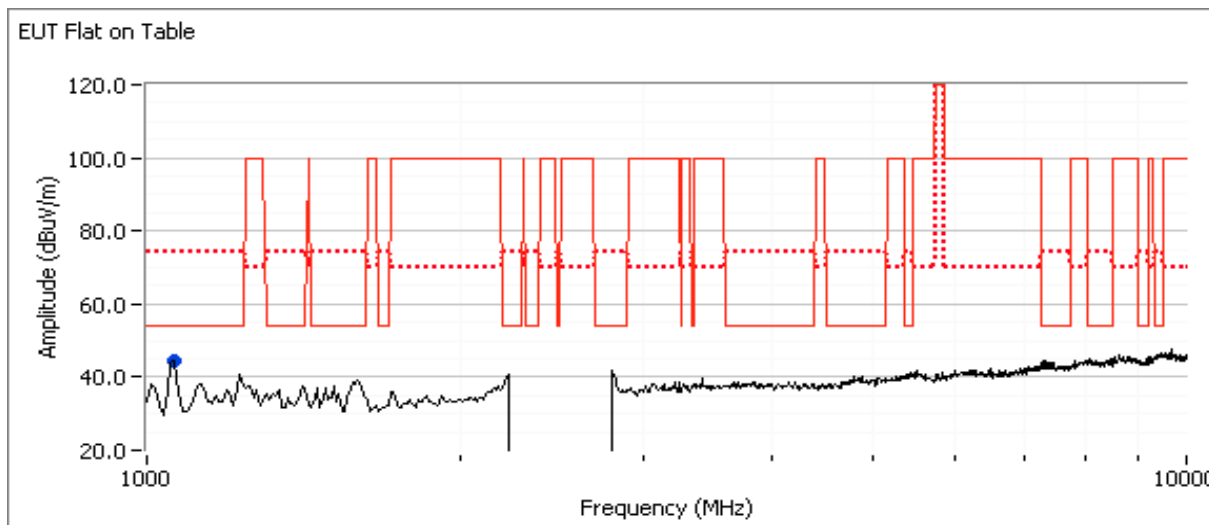
Run #1c: Channel 6, 2437MHz, 802.11g, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2440.670	83.2	V	-	-	Pk	113	1.3	RB 100 kHz;VB 100 kHz;Pk
2439.770	91.2	H	-	-	Pk	72	1.6	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	91.2	dB μ V/m
Limit for emissions outside of restricted bands:	61.2	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1065.480	42.0	V	54.0	-12.0	AVG	298	1.2	RB 1 MHz;VB 10 Hz;Pk
1065.030	53.4	V	74.0	-20.6	PK	298	1.2	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

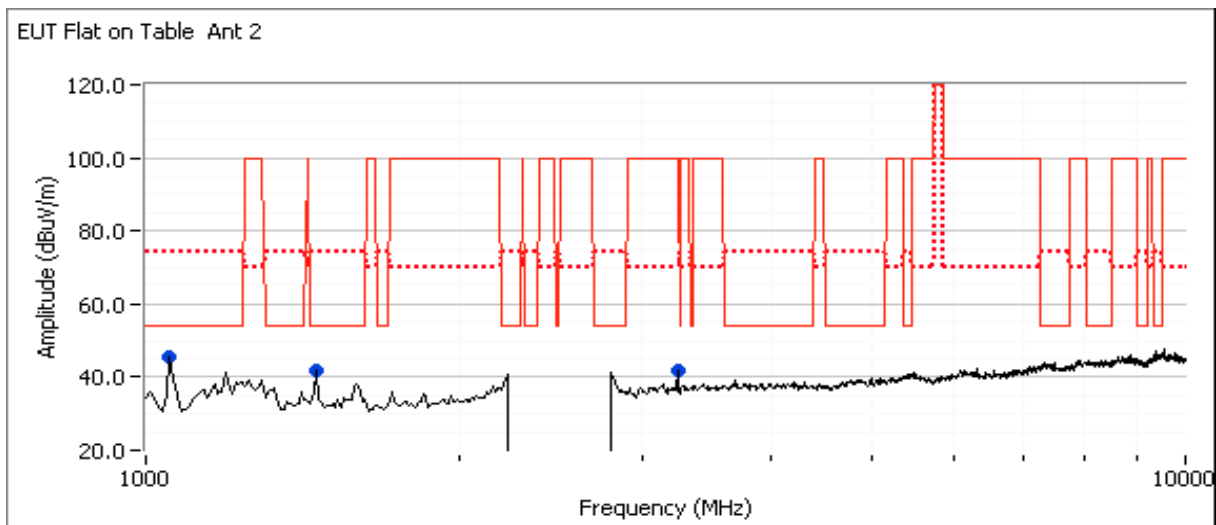
Run #1d: Channel 6, 2437MHz, 802.11g, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2429.600	93.6	V	-	-	Pk	275	1.0	RB 100 kHz;VB 100 kHz;Pk
2434.700	89.8	H	-	-	Pk	154	2.4	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	93.6	dB μ V/m
Limit for emissions outside of restricted bands:	63.6	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1063.120	36.0	V	54.0	-18.0	AVG	319	1.9	RB 1 MHz;VB 10 Hz;Pk
1457.010	29.4	V	54.0	-24.6	AVG	336	1.0	RB 1 MHz;VB 10 Hz;Pk
3239.330	43.4	V	70.0	-26.6	PK	108	1.6	RB 1 MHz;VB 3 MHz;Pk
1064.400	47.0	V	74.0	-27.0	PK	319	1.9	RB 1 MHz;VB 3 MHz;Pk
3239.990	32.1	V	63.6	-31.5	AVG	108	1.6	RB 1 MHz;VB 10 Hz;Pk
1456.910	40.3	V	74.0	-33.7	PK	336	1.0	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: Radiated Spurious Emissions, 1-26GHz Operating Mode: 802.11bg modes, EUT in table dock

Date of Test: 8/19/2010

Test Location: FT Chamber #5

Test Engineer: Suresh Kondapalli

Run #2a: Channel 6, 2437MHz, 802.11b, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

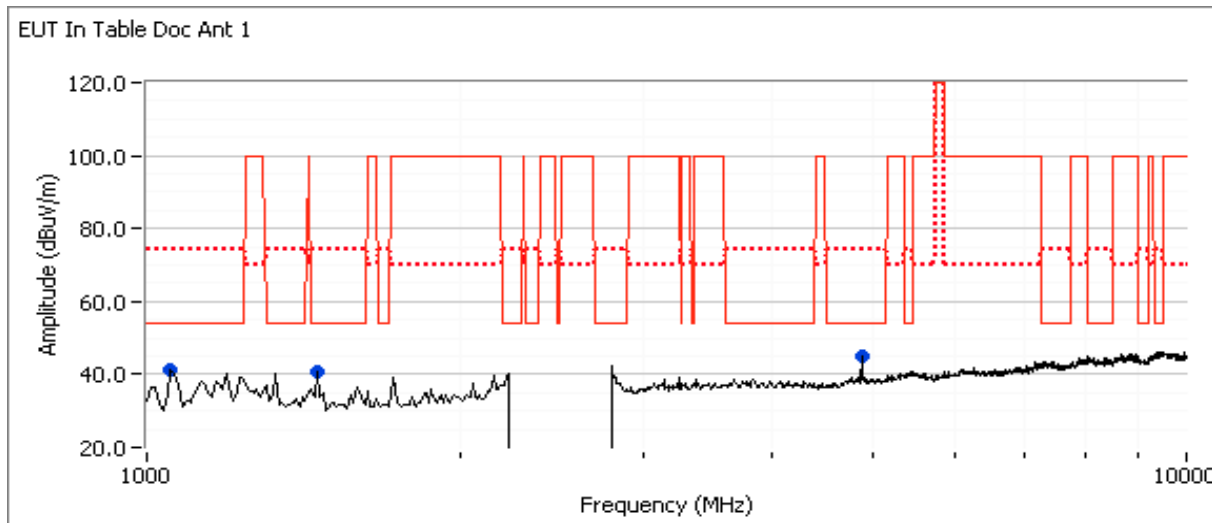
Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2436.470	95.7	V	-	-	Pk	93	1.2	RB 1 MHz;VB 1 kHz;Pk
2434.700	96.6	H	-	-	Pk	185	1.2	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in **100kHz RBW:** 96.6 dB μ V/m

96.6 dB μ V/m

Limit for emissions outside of restricted bands: 66.6 dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4874.040	46.8	V	54.0	-7.2	AVG	8	1.0	RB 1 MHz;VB 10 Hz;Pk
1060.860	43.9	V	54.0	-10.1	AVG	239	1.0	RB 1 MHz;VB 10 Hz;Pk
1059.110	59.7	V	74.0	-14.3	PK	239	1.0	RB 1 MHz;VB 3 MHz;Pk
1464.110	35.8	V	54.0	-18.2	AVG	242	1.0	RB 1 MHz;VB 10 Hz;Pk
4874.210	51.5	V	74.0	-22.5	PK	8	1.0	RB 1 MHz;VB 3 MHz;Pk
1465.940	48.4	V	74.0	-25.6	PK	242	1.0	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

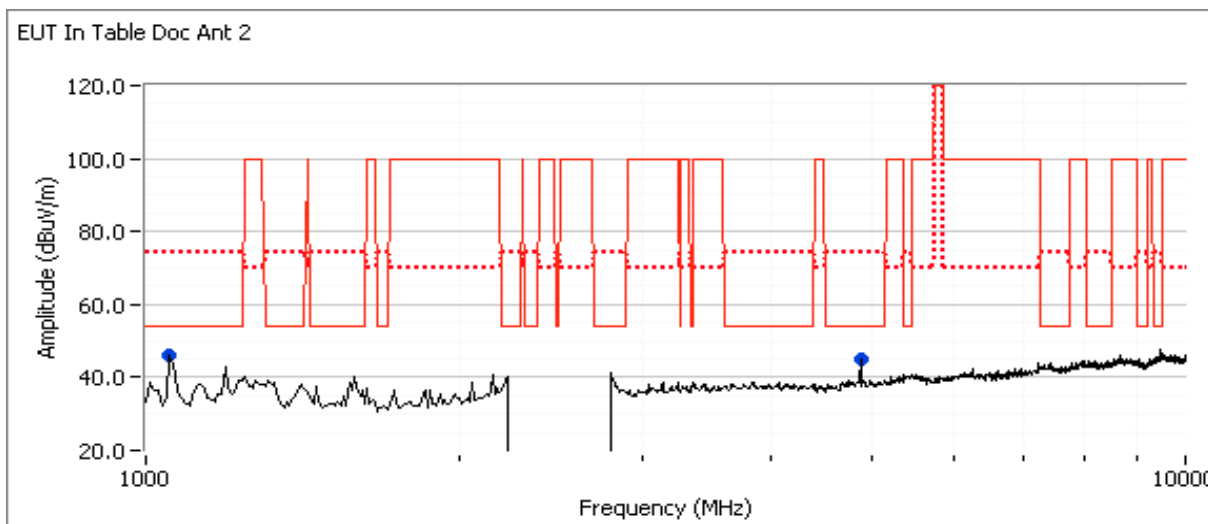
Run #2b: Channel 6, 2437MHz, 802.11b, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2436.730	93.4	V	-	-	Pk	242	1.3	RB 100 kHz;VB 100 kHz;Pk
2433.670	95.1	H	-	-	Pk	338	1.1	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	95.1	dB μ V/m
Limit for emissions outside of restricted bands:	65.1	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4874.050	46.4	H	54.0	-7.6	AVG	154	1.0	RB 1 MHz;VB 10 Hz;Pk
1124.190	33.4	V	54.0	-20.6	AVG	254	1.0	RB 1 MHz;VB 10 Hz;Pk
4874.100	50.9	H	74.0	-23.1	PK	154	1.0	RB 1 MHz;VB 3 MHz;Pk
1125.440	43.1	V	74.0	-30.9	PK	254	1.0	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

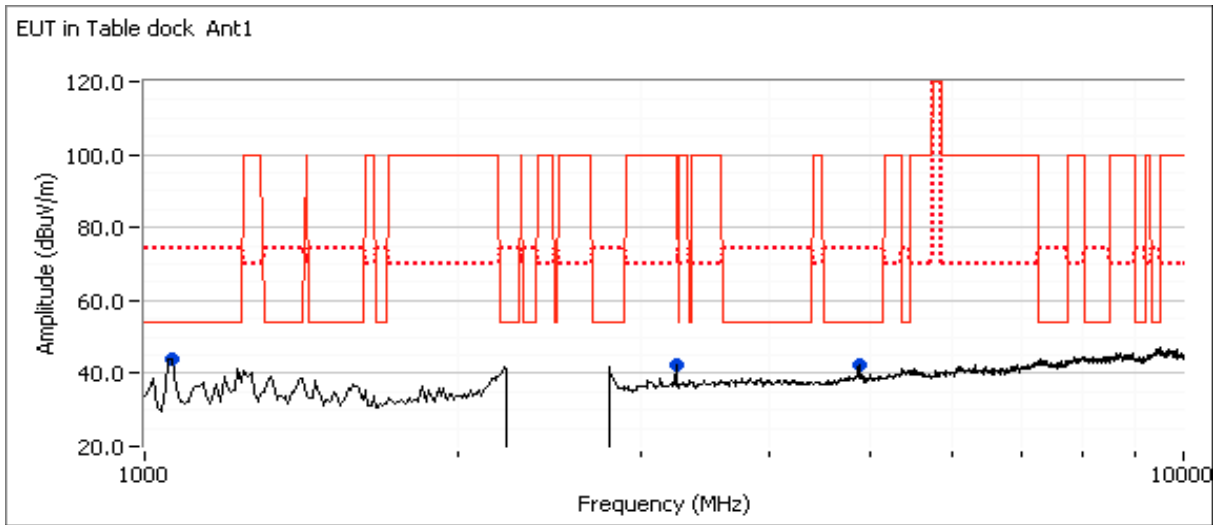
Run #2c: Channel 6, 2437MHz, 802.11g, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2439.800	101.4	H	-	-	Pk	251	1.1	RB 100 kHz;VB 100 kHz;Pk
2429.670	95.6	V	-	-	Pk	141	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	95.5	dB μ V/m
Limit for emissions outside of restricted bands:	65.5	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1063.680	39.7	V	54.0	-14.3	AVG	328	1.3	RB 1 MHz;VB 10 Hz;Pk
4872.250	39.2	V	54.0	-14.8	AVG	12	1.0	RB 1 MHz;VB 10 Hz;Pk
3249.250	49.6	H	70.0	-20.4	PK	158	1.0	RB 1 MHz;VB 3 MHz;Pk
3249.480	44.8	H	65.5	-20.7	AVG	158	1.0	RB 1 MHz;VB 10 Hz;Pk
4872.190	51.1	V	74.0	-22.9	PK	12	1.0	RB 1 MHz;VB 3 MHz;Pk
1061.690	50.3	V	74.0	-23.7	PK	328	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

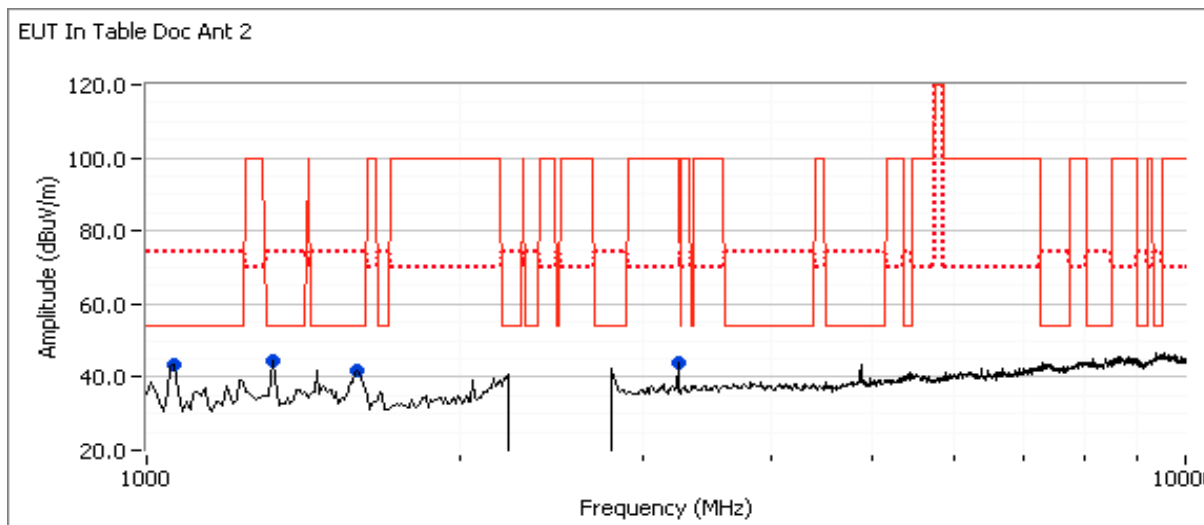
Run #2d: Channel 6, 2437MHz, 802.11g, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2434.700	94.8	V	-	-	Pk	122	1.3	RB 100 kHz;VB 100 kHz;Pk
2430.830	97.6	H	-	-	Pk	184	1.3	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	97.6	dB μ V/m
Limit for emissions outside of restricted bands:	67.6	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1326.870	41.3	V	54.0	-12.7	AVG	179	1.3	RB 1 MHz;VB 10 Hz;Pk
1060.970	36.4	V	54.0	-17.6	AVG	180	1.0	RB 1 MHz;VB 10 Hz;Pk
3249.450	49.3	H	70.0	-20.7	PK	145	1.3	RB 1 MHz;VB 3 MHz;Pk
1588.790	32.9	V	54.0	-21.1	AVG	134	1.0	RB 1 MHz;VB 10 Hz;Pk
1060.950	51.3	V	74.0	-22.7	PK	180	1.0	RB 1 MHz;VB 3 MHz;Pk
1324.880	48.3	V	74.0	-25.7	PK	179	1.3	RB 1 MHz;VB 3 MHz;Pk
1589.110	42.2	V	74.0	-31.8	PK	134	1.0	RB 1 MHz;VB 3 MHz;Pk
3249.460	49.3	H	67.6	-18.3	AVG	145	1.3	RB 1 MHz;VB 10 Hz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

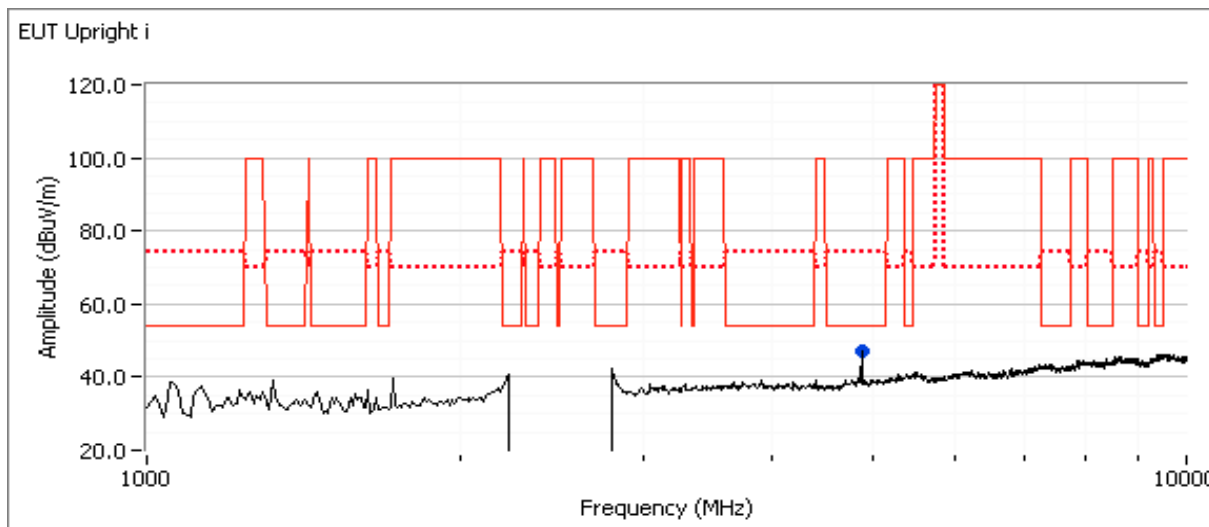
Run #3: Radiated Spurious Emissions, 1-26GHz Operating Mode: 802.11bg modes, EUT in wall dock

Run #3a: Channel 6, 2437MHz, 802.11b, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2435.700	96.1	V	-	-	Pk	206	1.1	RB 100 kHz;VB 100 kHz;Pk
2435.670	100.2	H	-	-	Pk	57	1.2	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	100.2	dB μ V/m	
Limit for emissions outside of restricted bands:	70.2	dB μ V/m	Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4849.540	34.6	V	54.0	-19.4	AVG	0	1.6	RB 1 MHz;VB 10 Hz;Pk
4850.470	46.0	V	74.0	-28.0	PK	0	1.6	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3b: Channel 6, 2437MHz, 802.11g, Antenna 1

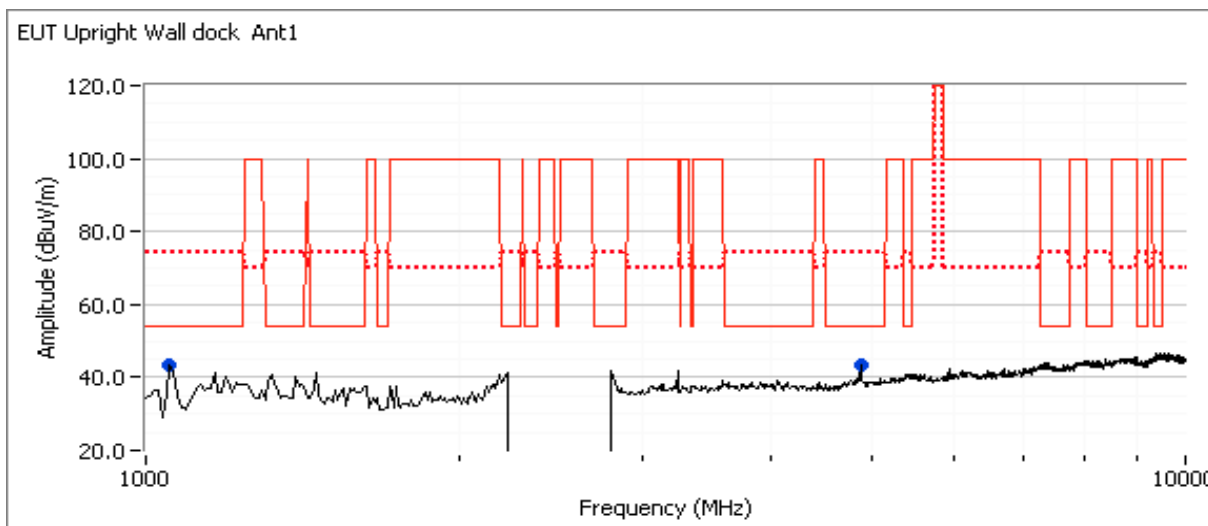
Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2442.370	97.6	V	-	-	Pk	145	1.1	RB 100 kHz;VB 100 kHz;Pk
2432.170	101.2	H	-	-	Pk	126	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in **100kHz RBW:** 101.2 dB μ V/m

Limit for emissions outside of restricted bands: 71.2 dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4863.440	37.5	V	54.0	-16.5	AVG	1	1.6	RB 1 MHz;VB 10 Hz;Pk
1056.190	34.4	V	54.0	-19.6	AVG	321	1.8	RB 1 MHz;VB 10 Hz;Pk
1056.280	50.5	V	74.0	-23.5	PK	321	1.8	RB 1 MHz;VB 3 MHz;Pk
4861.330	49.8	V	74.0	-24.2	PK	1	1.6	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

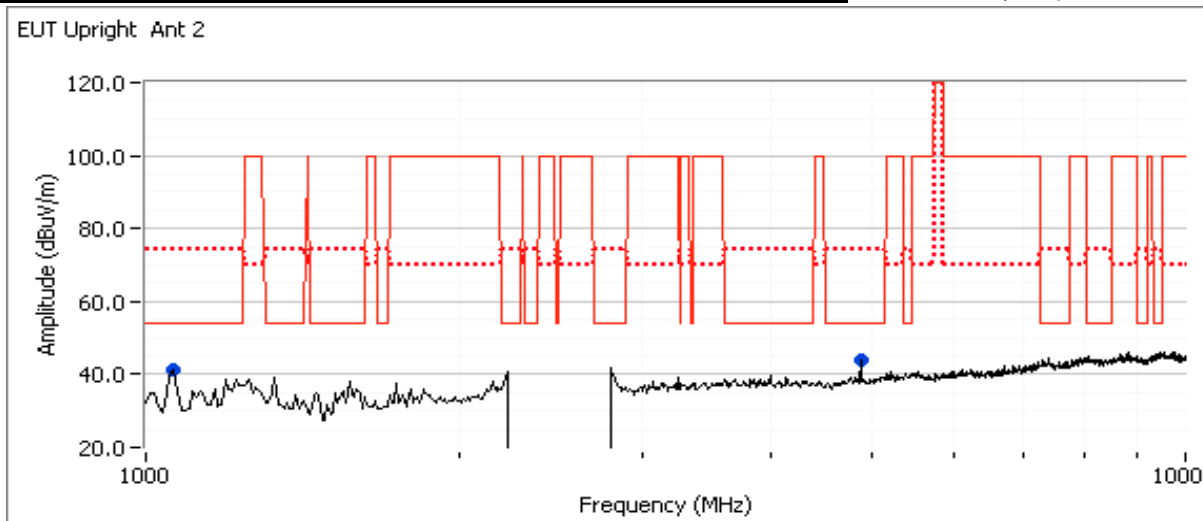
Run #3c: Channel 6, 2437MHz, 802.11b, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2437.800	89.4	V	-	-	Pk	43	1.0	RB 100 kHz;VB 100 kHz;Pk
2436.730	94.2	H	-	-	Pk	152	1.6	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	94.2	dB μ V/m
Limit for emissions outside of restricted bands:	64.2	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1061.500	44.1	V	54.0	-9.9	AVG	220	1.0	RB 1 MHz;VB 10 Hz;Pk
4866.540	35.9	H	54.0	-18.1	AVG	146	1.4	RB 1 MHz;VB 10 Hz;Pk
1060.370	52.8	V	74.0	-21.2	PK	220	1.0	RB 1 MHz;VB 3 MHz;Pk
4866.980	46.3	H	74.0	-27.7	PK	146	1.4	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4: Radiated Spurious Emissions, 1-26GHz Operating Mode: 802.11bg modes, EUT in wall dock

Worst case mode (802.11g) in worst case orientation Wall dock,

Date of Test: 8/20/2010

Test Engineer: Suresh Kondapalli

Test Location: FT chamber #7

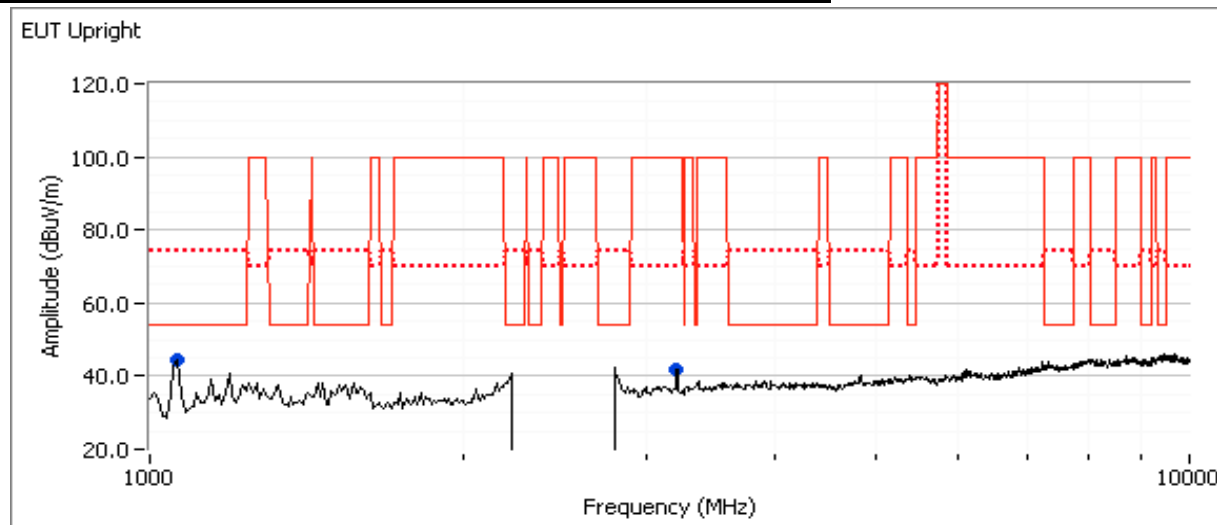
Run #4a: Channel 1, 2412MHz, 802.11g Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2414.800	94.5	V	-	-	Pk	276	1.0	RB 100 kHz;VB 100 kHz;Pk
2405.870	98.6	H	-	-	Pk	62	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in **100kHz RBW:** 98.6 dB μ V/m

Limit for emissions outside of restricted bands: 68.6 dB μ V/m Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1059.540	36.2	V	54.0	-17.8	AVG	236	1.3	RB 1 MHz;VB 10 Hz;Pk
3216.280	47.2	H	68.6	-21.4	PK	167	1.0	RB 1 MHz;VB 3 MHz;Pk
3216.050	41.0	H	68.6	-27.6	AVG	167	1.0	RB 1 MHz;VB 10 Hz;Pk
1059.800	45.7	V	74.0	-28.3	PK	236	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

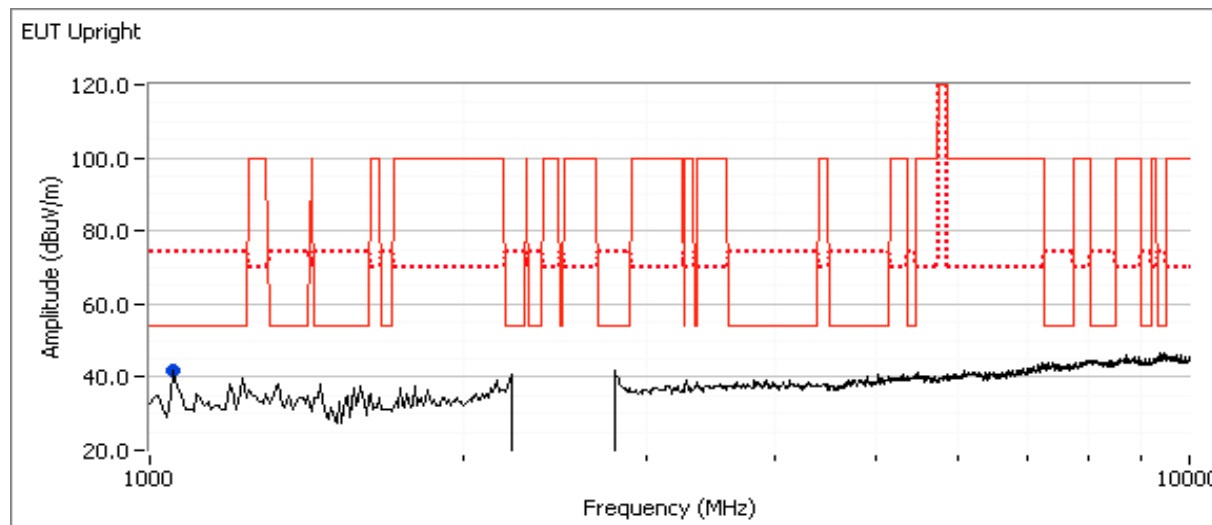
Run #4a: Channel 11, 2462MHz, 802.11g, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
2459.700	89.8	V	-	-	Pk	150	1.0	RB 100 kHz;VB 100 kHz;Pk
2458.370	95.1	H	-	-	Pk	62	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	95.1	dB μ V/m
Limit for emissions outside of restricted bands:	65.1	dB μ V/m

Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1049.090	29.8	V	54.0	-24.2	AVG	71	2.5	RB 1 MHz;VB 10 Hz;Pk
1049.170	38.1	V	74.0	-35.9	PK	71	2.5	RB 1 MHz;VB 3 MHz;Pk

- Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
- Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9	T-Log Number:	T80241
	Docking Station and TBD Docking Station	Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #5: Radiated Spurious Emissions, 1-26GHz Operating Mode: 802.11bg modes, EUT in wall dock

Worst case mode (802.11b, antenna #1) in worst case orientation (Table Dock)

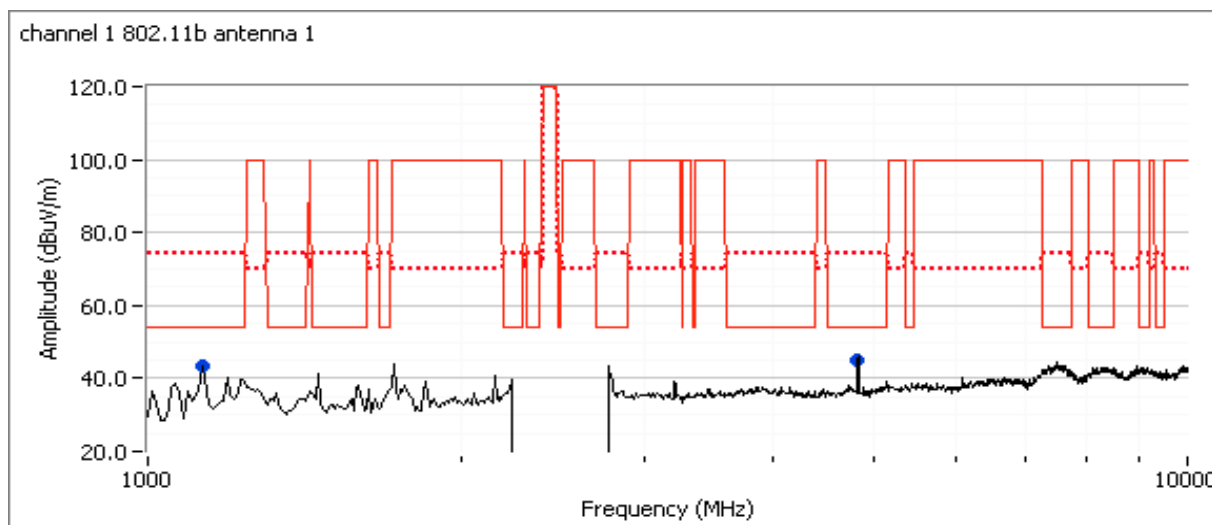
Date of Test: 8/24/2010

Test Engineer: Joseph Cadigal

Test Location: FT Chamber#7

Run #5a: Channel 1, 2412MHz, 802.11b Antenna 1

Fundamental emission level @ 3m in 100kHz RBW:	91.0	dB μ V/m	
Limit for emissions outside of restricted bands:	61.0	dB μ V/m	Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1126.000	34.2	V	54.0	-19.8	AVG	224	1.6	RB 1 MHz;VB 10 Hz;Pk
4813.020	34.1	V	54.0	-19.9	AVG	0	1.0	RB 1 MHz;VB 10 Hz;Pk
4813.280	43.0	V	74.0	-31.0	PK	0	1.0	RB 1 MHz;VB 3 MHz;Pk
1124.890	41.7	V	74.0	-32.3	PK	224	1.6	RB 1 MHz;VB 3 MHz;Pk

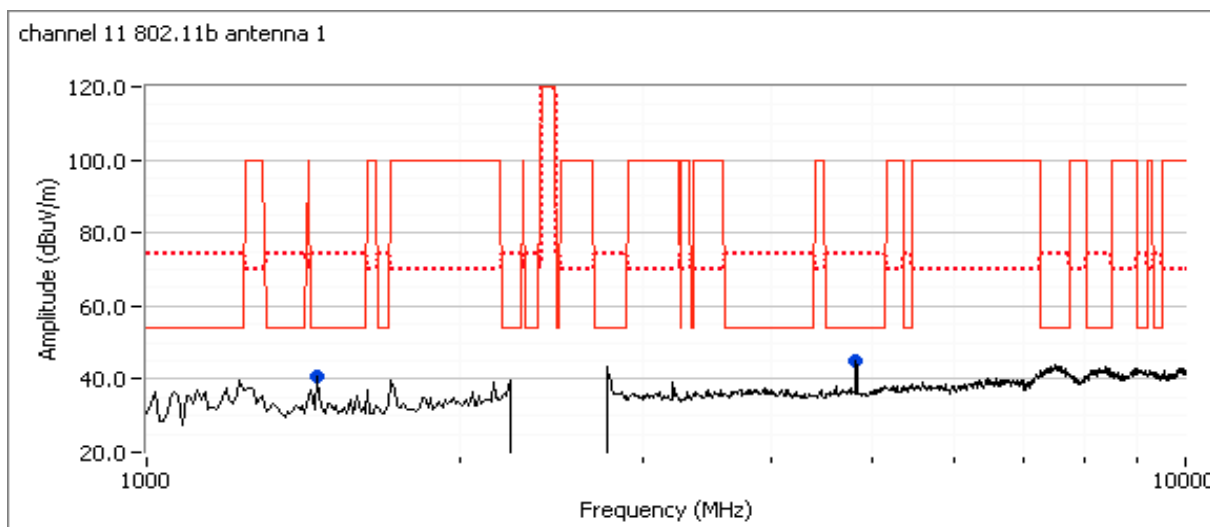
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #5b: Channel 11, 2462MHz, 802.11b, Antenna 1

Fundamental emission level @ 3m in 100kHz RBW :	93.6	dB μ V/m	
Limit for emissions outside of restricted bands:	63.6	dB μ V/m	Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247	Detector	Azimuth	Height	Comments	
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
4807.040	30.6	V	54.0	-23.4	AVG	31	1.0	RB 1 MHz;VB 10 Hz;Pk
1467.840	30.1	V	54.0	-23.9	AVG	256	1.9	RB 1 MHz;VB 10 Hz;Pk
1468.530	42.6	V	74.0	-31.4	PK	256	1.9	RB 1 MHz;VB 3 MHz;Pk
4806.370	41.9	V	74.0	-32.1	PK	31	1.0	RB 1 MHz;VB 3 MHz;Pk

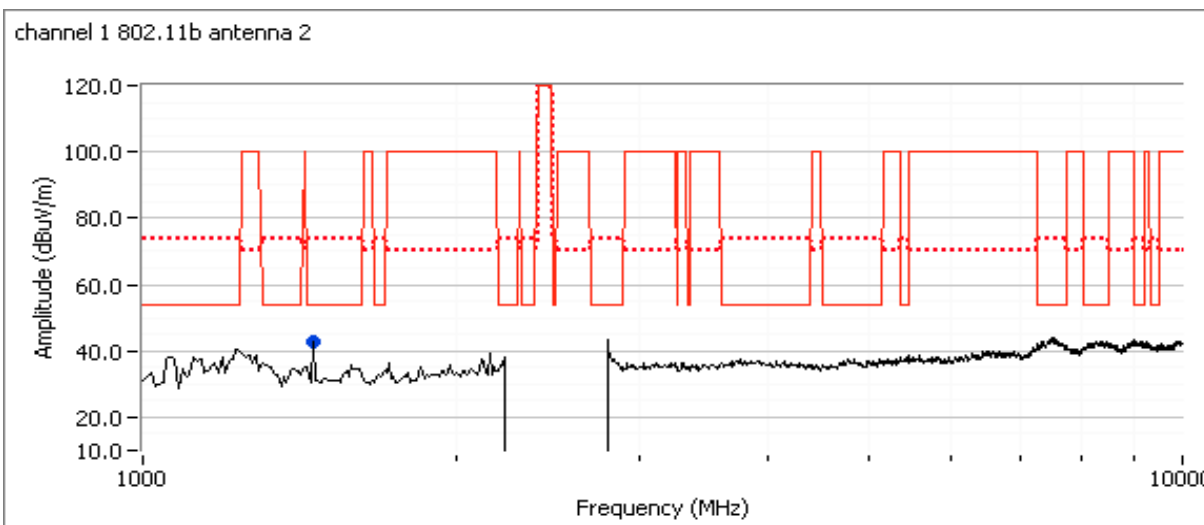
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #5c: Channel 1, 2412MHz, 802.11b Antenna 2

Fundamental emission level @ 3m in 100kHz RBW :	98.1	dB μ V/m	
Limit for emissions outside of restricted bands:	68.1	dB μ V/m	Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

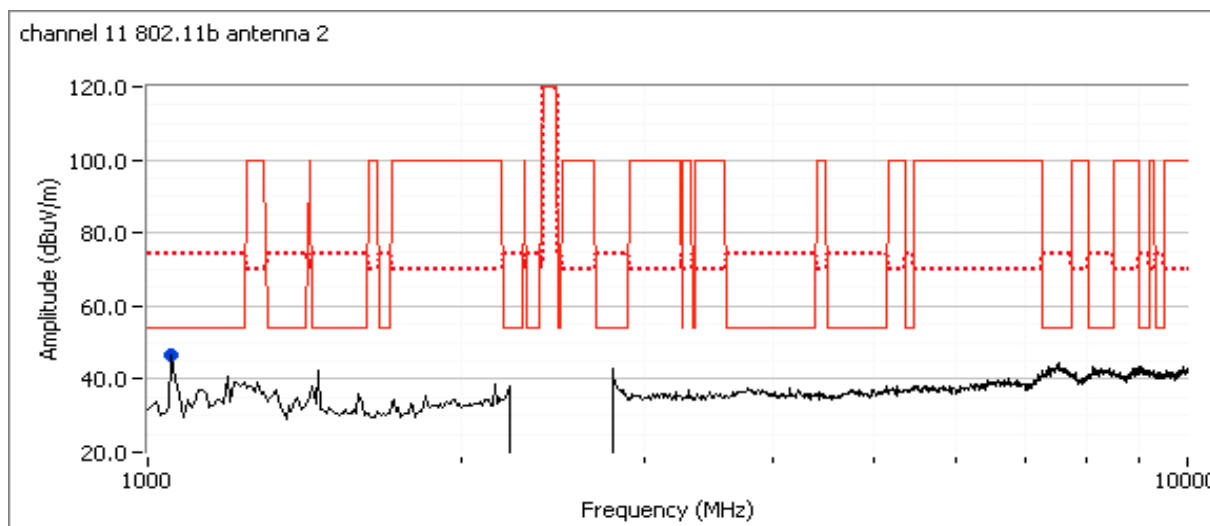
Frequency	Level	Pol	15.209 / 15.247	Detector	Azimuth	Height	Comments	
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1461.910	28.9	V	54.0	-25.1	AVG	320	1.3	RB 1 MHz;VB 10 Hz;Pk
1464.370	37.3	V	74.0	-36.7	PK	320	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #5d: Channel 11, 2462MHz, 802.11b, Antenna 2



Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1062.380	31.8	V	54.0	-22.2	AVG	316	1.6	RB 1 MHz;VB 10 Hz;Pk
1061.160	46.2	V	74.0	-27.8	PK	316	1.6	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions, 1 - 40GHz (802.11a)

Summary of Results - Device Operating in the 5 GHz Band

Run #	Mode	Channel	Power Setting	Antenna	Test Performed	Limit	Result / Margin
EUT flat on table							
1a	802.11a	5785MHz (#157)	18	1	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	30.3dBµV/m @ 11571.8MHz (-23.7dB)
1b			18	2			35.8dBµV/m @ 1061.2MHz (-18.2dB)
EUT in angled/upright position in table dock							
2a	802.11a	5785MHz (#157)	18	1	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	34.1dBµV/m @ 1328.2MHz (-19.9dB)
2b			18	2			32.5dBµV/m @ 1065.9MHz (-21.5dB)
EUT fully upright position in wall dock (to evaluate wall dock's effect on panel's antennas)							
3a	802.11a	5785MHz (#157)	18	1	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	38.7dBµV/m @ 11570.8MHz (-15.3dB)
3b			18	2			36.1dBµV/m @ 11561.0MHz (-17.9dB)
EUT in worst case configuration (upright in wall dock), top and bottom channels							
Note - if no significant difference between antenna 1 and 2 and/or margin < 10dB test both antennas, otherwise do just worst antenna.							
4a	802.11a	5745MHz (#149)	18	1	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	39.2dBµV/m @ 1060.1MHz (-14.8dB)
4b		5825MHz (#165)	18	1			35.7dBµV/m @ 11648.1MHz (-18.3dB)
4c	802.11a	5745MHz (#149)	18	2	Radiated Emissions, 1 - 40 GHz	FCC Part 15.209 / 15.247(c)	38.6dBµV/m @ 11488.1MHz (-15.4dB)
4d		5825MHz (#165)	18	2			40.1dBµV/m @ 11650 MHz (-13.9dB)

Note: Frequency 18 to 40GHz was scanned - no emissions were found above noise floor

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 23 °C
 Rel. Humidity: 42 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1: Radiated Spurious Emissions, 1-40GHz Operating Mode: 802.11a modes, EUT Flat on table

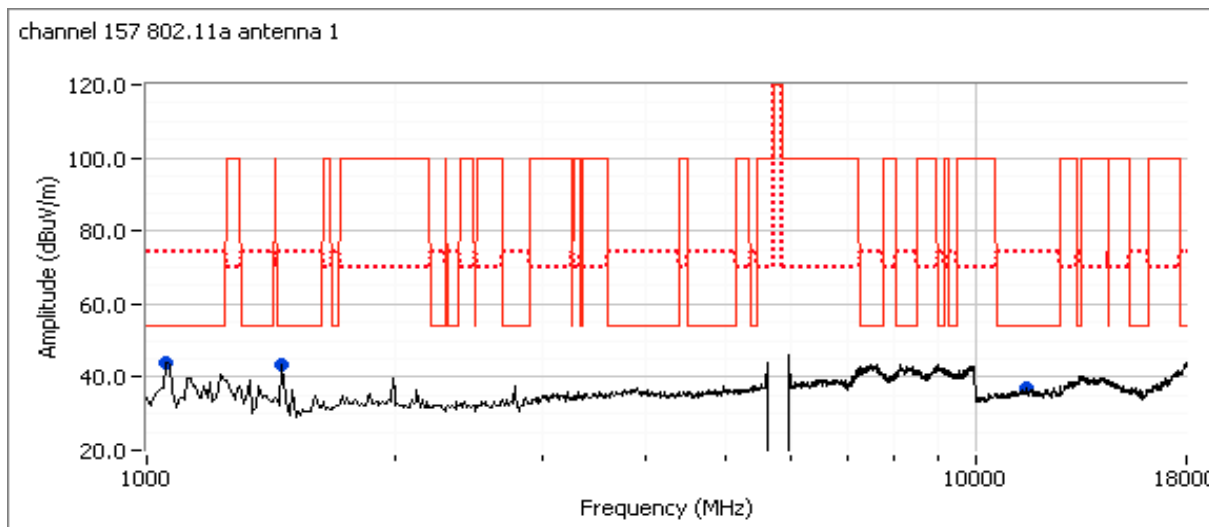
Date of Test: 8/24/2010
 Test Engineer: Joseph Cadigal
 Test Location: FT Chamber #7

Run #1a: Channel 157, 5785MHz, 802.11a, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
5785.020	85.6	V	120.0	-34.4	AVG	0	1.1	RB 1 MHz;VB 10 Hz;Pk
5785.150	91.9	V	120.0	-28.1	PK	0	1.1	RB 1 MHz;VB 3 MHz;Pk
5785.040	85.9	H	120.0	-34.1	AVG	136	1.8	RB 1 MHz;VB 10 Hz;Pk
5784.930	92.1	H	120.0	-27.9	PK	136	1.8	RB 1 MHz;VB 3 MHz;Pk
5785.130	85.6	H	120.0	-34.4	-	136	1.8	RB 100 kHz;VB 100 kHz;Pk
5785.200	87.0	V	120.0	-33.0	-	0	1.1	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	87	dB μ V/m	
Limit for emissions outside of restricted bands:	57	dB μ V/m	Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
11571.780	30.3	V	54.0	-23.7	AVG	346	1.3	RB 1 MHz;VB 10 Hz;Pk
11570.920	41.8	V	74.0	-32.2	PK	346	1.3	RB 1 MHz;VB 3 MHz;Pk
1465.340	29.5	V	54.0	-24.5	AVG	255	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.220	36.3	V	74.0	-37.7	PK	255	1.0	RB 1 MHz;VB 3 MHz;Pk
1049.430	30.7	V	54.0	-23.3	AVG	259	1.3	RB 1 MHz;VB 10 Hz;Pk
1049.310	44.1	V	74.0	-29.9	PK	259	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

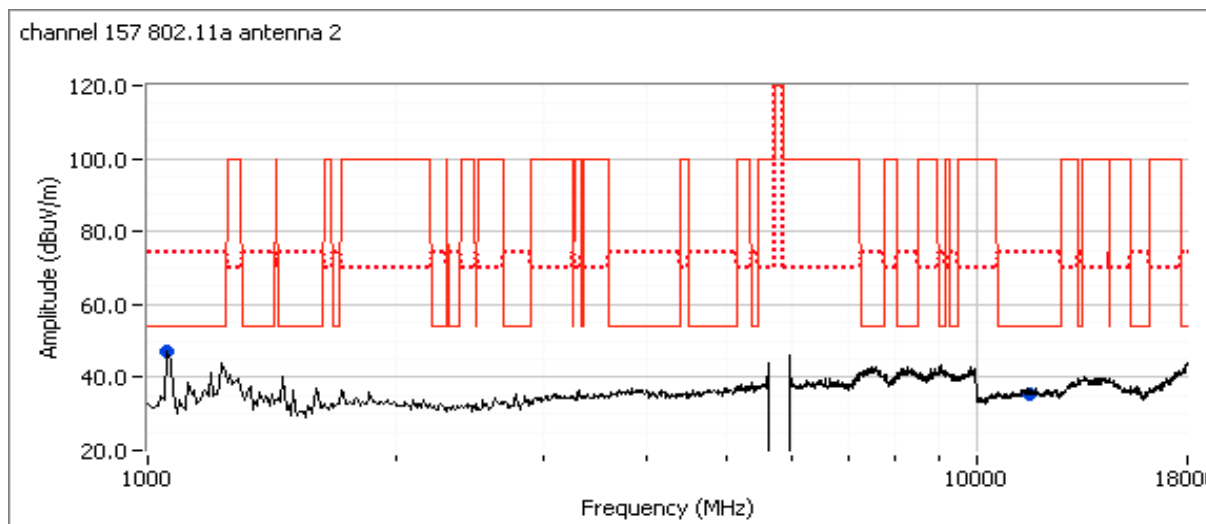
Run #1b: Channel 157, 5785MHz, 802.11a, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5785.200	79.7	V	120.0	-40.3	AVG	342	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.070	86.3	V	120.0	-33.7	PK	342	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.080	79.6	V	120.0	-40.4	-	342	1.0	RB 1 MHz;VB 10 kHz;Pk
5785.200	67.1	H	120.0	-52.9	AVG	8	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.470	73.5	H	120.0	-46.5	PK	8	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.200	67.4	H	120.0	-52.6	-	8	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	79.6	dB μ V/m
Limit for emissions outside of restricted bands:	49.6	dB μ V/m

Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1061.210	35.8	V	54.0	-18.2	AVG	150	1.3	RB 1 MHz;VB 10 Hz;Pk
11563.700	28.6	H	54.0	-25.4	AVG	289	2.2	RB 1 MHz;VB 10 Hz;Pk
1060.400	47.2	V	74.0	-26.8	PK	150	1.3	RB 1 MHz;VB 3 MHz;Pk
11563.920	39.7	H	74.0	-34.3	PK	289	2.2	RB 1 MHz;VB 3 MHz;Pk

Note 1:	For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
Note 2:	Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: Radiated Spurious Emissions, 1-40GHz Operating Mode: 802.11a modes, EUT in table dock

Date of Test: 8/24/2010
 Test Engineer: Joseph Cadigal
 Test Location: FT Chamber #7

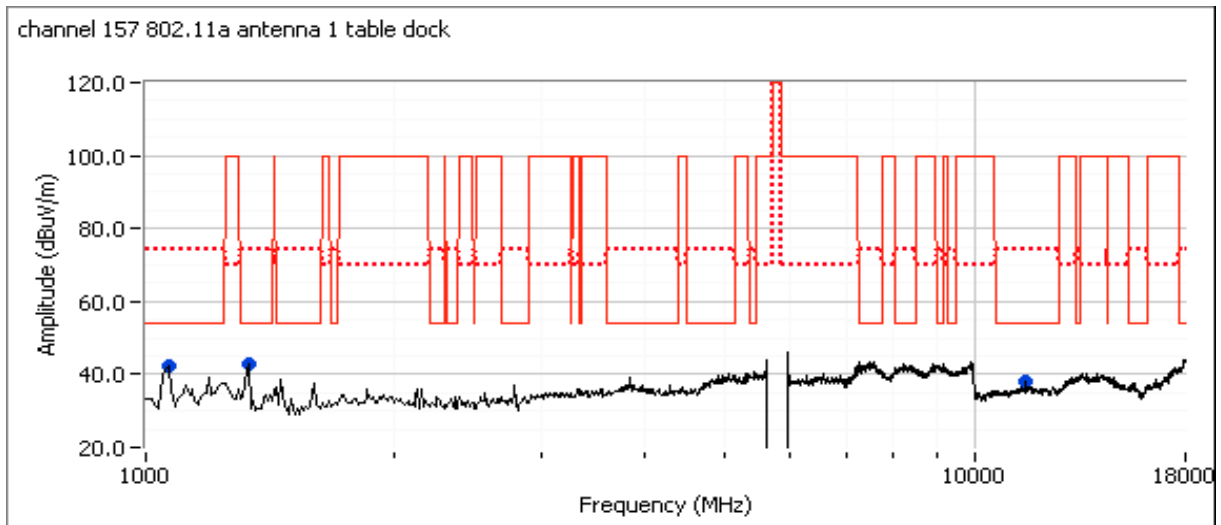
Run #2a: Channel 157, 5785MHz, 802.11a, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
5785.200	93.3	V	120.0	-26.7	AVG	162	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.070	98.7	V	120.0	-21.3	PK	162	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.200	93.3	V	120.0	-26.7	-	162	1.0	RB 100 kHz;VB 100 kHz;Pk
5785.080	90.9	H	120.0	-29.1	AVG	346	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.000	96.3	H	120.0	-23.7	PK	346	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.200	90.7	H	120.0	-29.3	-	346	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	93.3	dB μ V/m
Limit for emissions outside of restricted bands:	63.3	dB μ V/m

Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1328.190	34.1	V	54.0	-19.9	AVG	286	1.3	RB 1 MHz;VB 10 Hz;Pk
1069.870	31.3	V	54.0	-22.7	AVG	308	1.6	RB 1 MHz;VB 10 Hz;Pk
11546.340	29.3	V	54.0	-24.7	AVG	348	1.0	RB 1 MHz;VB 10 Hz;Pk
1327.560	45.5	V	74.0	-28.5	PK	286	1.3	RB 1 MHz;VB 3 MHz;Pk
1069.930	40.8	V	74.0	-33.2	PK	308	1.6	RB 1 MHz;VB 3 MHz;Pk
11547.670	40.1	V	74.0	-33.9	PK	348	1.0	RB 1 MHz;VB 3 MHz;Pk

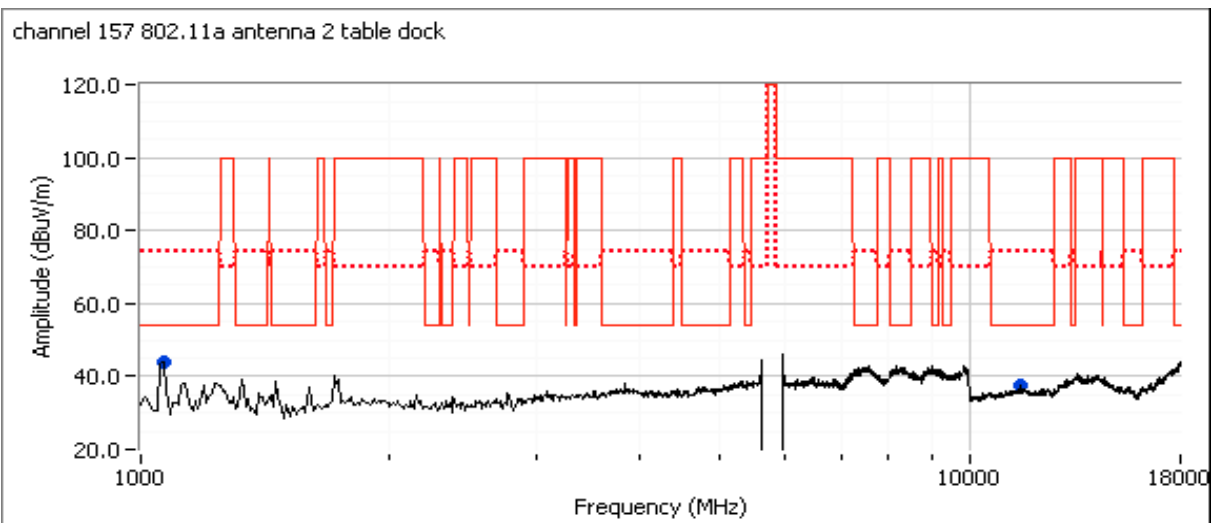
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Run #2b: Channel 157, 5785MHz, 802.11a, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
5785.200	83.5	V	120.0	-36.5	AVG	153	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.270	87.0	V	120.0	-33.0	PK	153	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.200	82.5	V	120.0	-37.5	-	153	1.0	RB 100 kHz;VB 100 kHz;Pk
5785.080	86.8	H	120.0	-33.2	AVG	150	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.020	91.7	H	120.0	-28.3	PK	150	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.270	85.4	H	120.0	-34.6	-	150	1.0	RB 100 kHz;VB 100 kHz;Pk



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1065.920	32.5	V	54.0	-21.5	AVG	220	1.0	RB 1 MHz;VB 10 Hz;Pk
11552.470	29.0	V	54.0	-25.0	AVG	342	1.6	RB 1 MHz;VB 10 Hz;Pk
1067.140	46.1	V	74.0	-27.9	PK	220	1.0	RB 1 MHz;VB 3 MHz;Pk
11552.710	40.0	V	74.0	-34.0	PK	342	1.6	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3: Radiated Spurious Emissions, 1-40GHz Operating Mode: 802.11a modes, EUT in wall dock

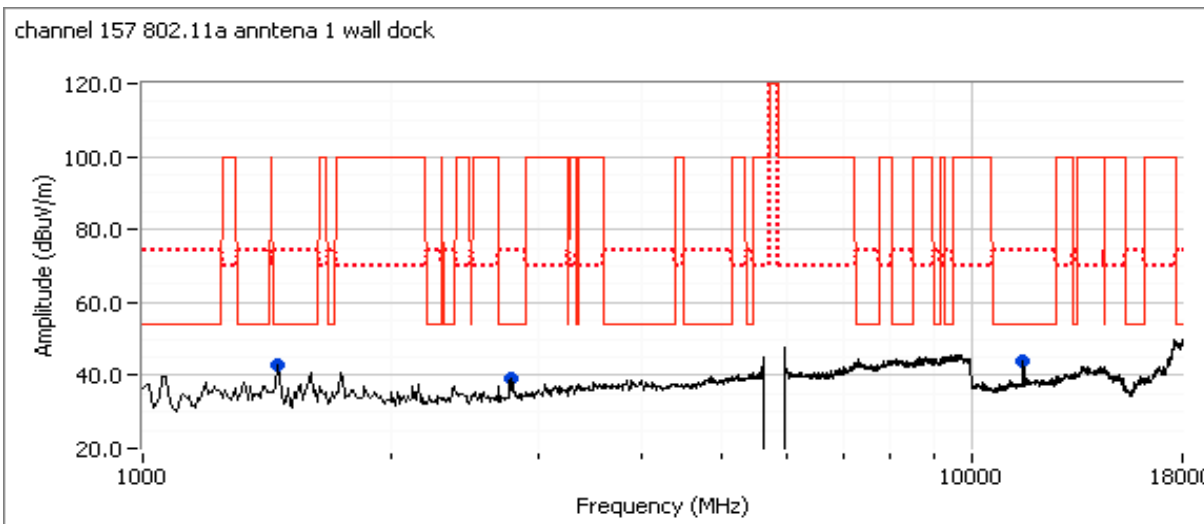
Date of Test: 8/25/2010
 Test Engineer: Joseph Cadigal
 Test Location: FT Chamber#5

Run #3a: Channel 157, 5785MHz, 802.11a, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5785.270	96.6	V	120.0	-23.4	AVG	153	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.070	103.2	V	120.0	-16.8	PK	153	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.270	95.0	V	120.0	-25.0	-	152	1.0	RB 100 kHz;VB 100 kHz;Pk
5785.270	93.9	H	120.0	-26.1	AVG	343	1.1	RB 1 MHz;VB 10 Hz;Pk
5785.200	100.8	H	120.0	-19.2	PK	343	1.1	RB 1 MHz;VB 3 MHz;Pk
5785.400	92.6	H	120.0	-27.4	-	343	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:		dB μ V/m
Limit for emissions outside of restricted bands:	-30 dB μ V/m	Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dBuV/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
11570.830	38.7	V	54.0	-15.3	AVG	329	1.0	RB 1 MHz;VB 10 Hz;Pk
3856.800	38.3	H	54.0	-15.7	AVG	112	1.0	RB 1 MHz;VB 10 Hz;Pk
11572.790	51.7	V	74.0	-22.3	PK	329	1.0	RB 1 MHz;VB 3 MHz;Pk
3856.870	46.6	H	74.0	-27.4	PK	112	1.0	RB 1 MHz;VB 3 MHz;Pk
1881.420	40.9	V	70.0	-29.1	PK	336	1.0	RB 1 MHz;VB 3 MHz;Pk
1882.170	30.0	V	100.0	-70.0	AVG	336	1.0	RB 1 MHz;VB 10 Hz;Pk

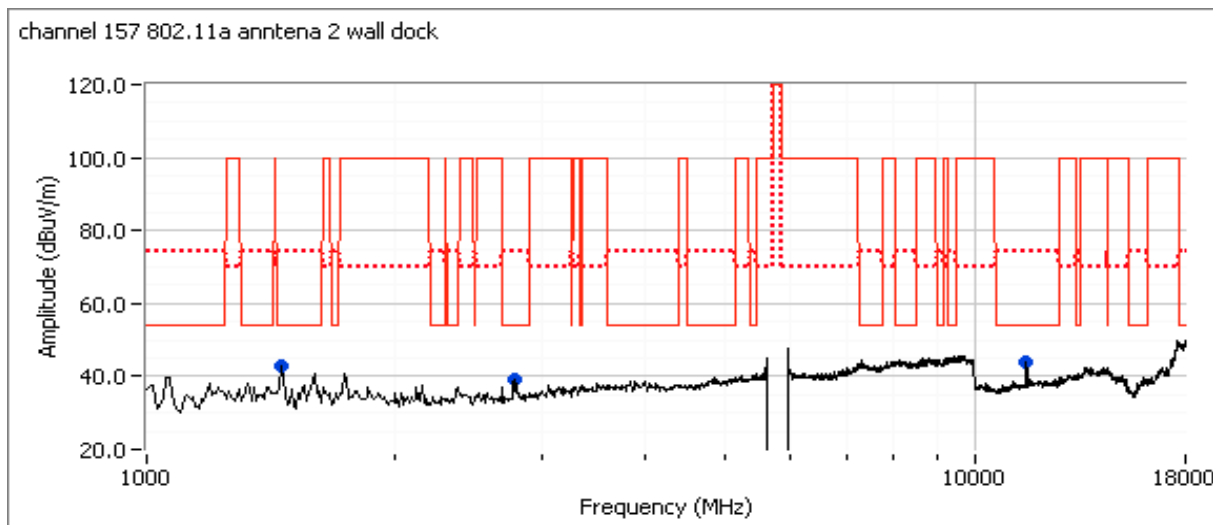
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Run #3b: Channel 157, 5785MHz, 802.11a, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency MHz	Level dBuV/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
5785.330	83.5	V	120.0	-36.5	AVG	349	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.330	89.9	V	120.0	-30.1	PK	349	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.270	83.1	V	120.0	-36.9	-	349	1.0	RB 100 kHz;VB 100 kHz;Pk
5785.270	83.4	H	120.0	-36.6	AVG	99	1.0	RB 1 MHz;VB 10 Hz;Pk
5785.530	90.1	H	120.0	-29.9	PK	99	1.0	RB 1 MHz;VB 3 MHz;Pk
5785.200	82.6	H	120.0	-37.4	-	99	1.0	RB 100 kHz;VB 100 kHz;Pk



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
11561.040	36.1	V	54.0	-17.9	AVG	331	1.0	RB 1 MHz;VB 10 Hz;Pk
2791.140	30.8	V	54.0	-23.2	AVG	65	1.3	RB 1 MHz;VB 10 Hz;Pk
1449.880	29.2	V	54.0	-24.8	AVG	260	1.6	RB 1 MHz;VB 10 Hz;Pk
11560.500	47.6	V	74.0	-26.4	PK	331	1.0	RB 1 MHz;VB 3 MHz;Pk
2791.970	41.1	V	74.0	-32.9	PK	65	1.3	RB 1 MHz;VB 3 MHz;Pk
1448.900	39.4	V	74.0	-34.6	PK	260	1.6	RB 1 MHz;VB 3 MHz;Pk

- Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.
- Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4: Radiated Spurious Emissions, 1-40GHz Operating Mode: 802.11a modes, EUT in wall dock

Worst case mode (802.11a, antenna #1) in worst case orientation (Table Dock)

Date of Test: 8/25/2010

Test Engineer: Joseph Cadigal

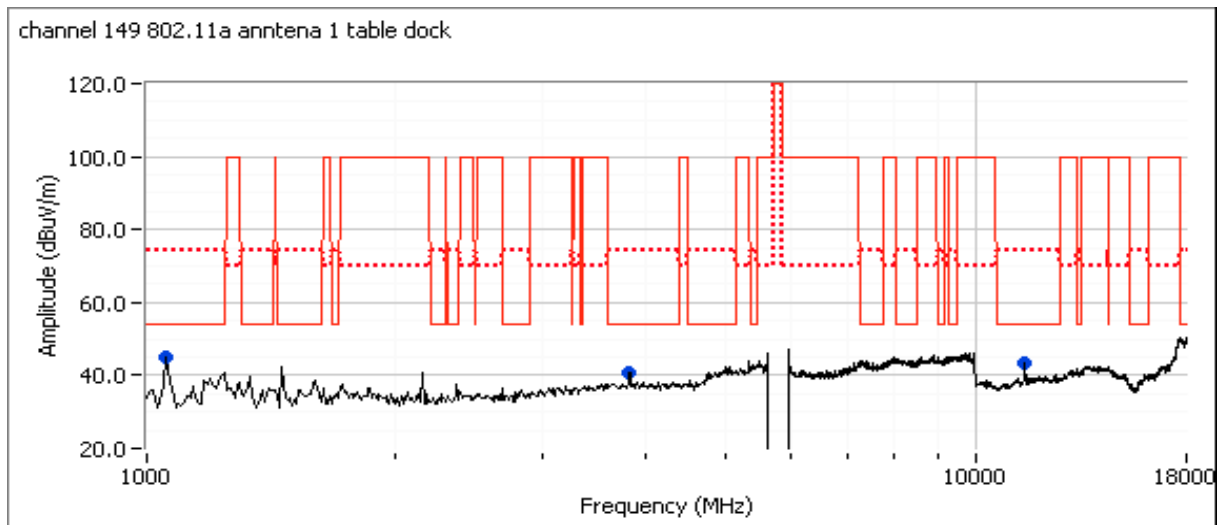
Test Location: FT Chamber#5

Run #4a: Channel 149, 5745MHz, 802.11a Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5745.270	94.7	V	120.0	-25.3	AVG	157	1.0	RB 1 MHz;VB 10 Hz;Pk
5745.130	101.9	V	120.0	-18.1	PK	157	1.0	RB 1 MHz;VB 3 MHz;Pk
5745.270	94.0	V	120.0	-26.0	-	157	1.0	RB 100 kHz;VB 100 kHz;Pk
5745.200	93.1	H	120.0	-26.9	AVG	137	1.0	RB 1 MHz;VB 10 Hz;Pk
5741.400	100.2	H	120.0	-19.8	PK	137	1.0	RB 1 MHz;VB 3 MHz;Pk
5745.330	92.2	H	120.0	-27.8	-	137	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW :	94	dB μ V/m	
Limit for emissions outside of restricted bands:	64	dB μ V/m	Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1060.100	39.2	V	54.0	-14.8	AVG	269	1.9	RB 1 MHz;VB 10 Hz;Pk
11484.640	36.5	V	54.0	-17.5	AVG	330	1.0	RB 1 MHz;VB 10 Hz;Pk
1059.550	53.3	V	74.0	-20.7	PK	269	1.9	RB 1 MHz;VB 3 MHz;Pk
3820.940	33.2	V	54.0	-20.8	AVG	23	1.0	RB 1 MHz;VB 10 Hz;Pk
11484.130	48.8	V	74.0	-25.2	PK	330	1.0	RB 1 MHz;VB 3 MHz;Pk
3820.350	45.0	V	74.0	-29.0	PK	23	1.0	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

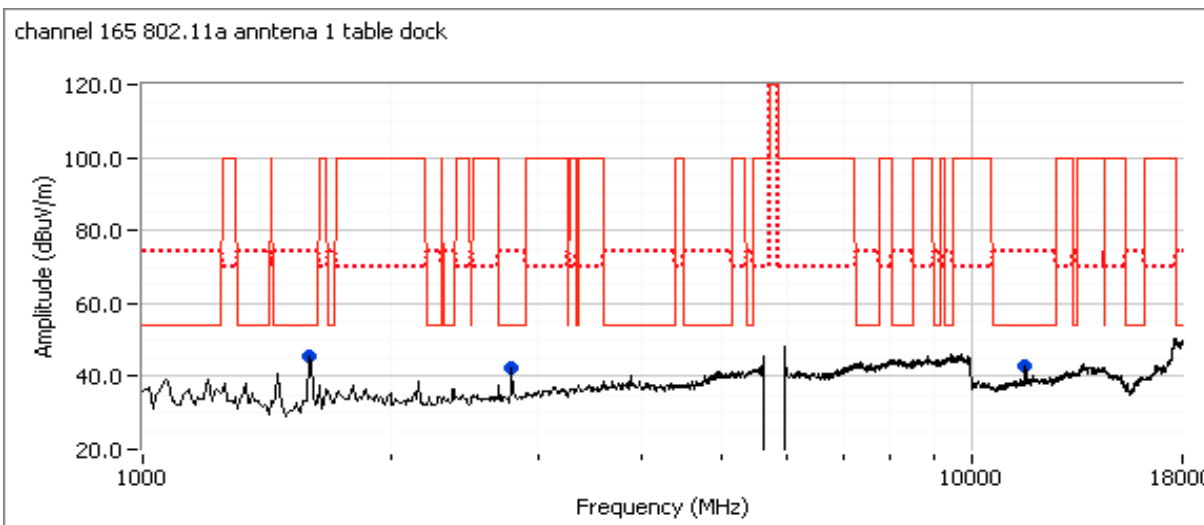
Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4b: Channel 165, 5825MHz, 802.11a, Antenna 1

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5831.130	94.6	V	120.0	-25.4	AVG	359	1.0	RB 1 MHz;VB 10 Hz;Pk
5831.930	102.9	V	120.0	-17.1	PK	359	1.0	RB 1 MHz;VB 3 MHz;Pk
5826.400	93.5	V	120.0	-26.5	-	359	1.0	RB 100 kHz;VB 100 kHz;Pk
5827.730	91.5	H	120.0	-28.5	AVG	348	1.0	RB 1 MHz;VB 10 Hz;Pk
5821.270	100.2	H	120.0	-19.8	PK	348	1.0	RB 1 MHz;VB 3 MHz;Pk
5819.530	91.1	H	120.0	-28.9	-	348	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW :	93.5	dB μ V/m	
Limit for emissions outside of restricted bands:	63.5	dB μ V/m	Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
11648.070	35.7	V	54.0	-18.3	AVG	333	1.0	RB 1 MHz;VB 10 Hz;Pk
1586.980	34.2	V	54.0	-19.8	AVG	250	1.0	RB 1 MHz;VB 10 Hz;Pk
2787.360	32.9	H	54.0	-21.1	AVG	208	1.0	RB 1 MHz;VB 10 Hz;Pk
11648.270	47.6	V	74.0	-26.4	PK	333	1.0	RB 1 MHz;VB 3 MHz;Pk
1586.740	44.9	V	74.0	-29.1	PK	250	1.0	RB 1 MHz;VB 3 MHz;Pk
2786.530	43.6	H	74.0	-30.4	PK	208	1.0	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

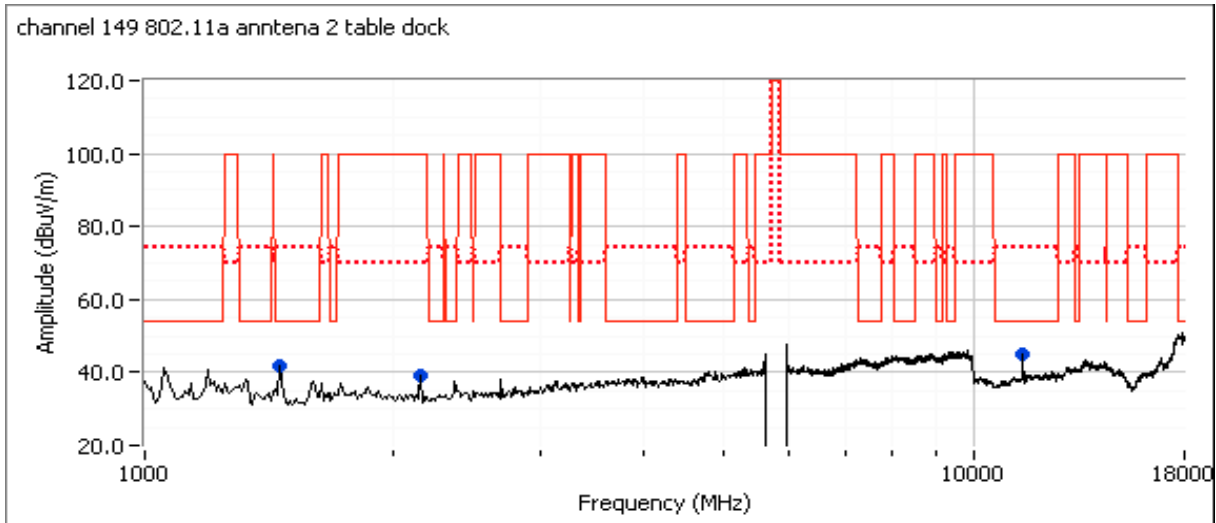
Run #4a: Channel 149, 5745MHz, 802.11a Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5745.330	87.0	V	120.0	-33.0	AVG	344	1.1	RB 1 MHz;VB 10 Hz;Pk
5744.800	94.3	V	120.0	-25.7	PK	344	1.1	RB 1 MHz;VB 3 MHz;Pk
5745.270	85.4	V	120.0	-34.6	-	344	1.1	RB 100 kHz;VB 100 kHz;Pk
5745.270	88.8	H	120.0	-31.2	AVG	136	1.0	RB 1 MHz;VB 10 Hz;Pk
5744.870	96.2	H	120.0	-23.8	PK	136	1.0	RB 1 MHz;VB 3 MHz;Pk
5745.270	86.4	H	120.0	-33.6	-	136	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	86.4	dB μ V/m
Limit for emissions outside of restricted bands:	56.4	dB μ V/m

Limit is -30dBc (UNII power measurement)



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Other Spurious Emissions

Frequency MHz	Level dB μ V/m	Pol v/h	15.209 / 15.247		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
11488.120	38.6	V	54.0	-15.4	AVG	330	1.3	RB 1 MHz;VB 10 Hz;Pk
11486.580	50.6	V	74.0	-23.4	PK	330	1.3	RB 1 MHz;VB 3 MHz;Pk
1465.670	29.8	V	54.0	-24.2	AVG	233	1.6	RB 1 MHz;VB 10 Hz;Pk
2160.000	44.5	H	70.0	-25.5	PK	181	1.0	RB 1 MHz;VB 3 MHz;Pk
1466.150	42.4	V	74.0	-31.6	PK	233	1.6	RB 1 MHz;VB 3 MHz;Pk
2160.020	37.1	H	100.0	-62.9	AVG	181	1.0	RB 1 MHz;VB 10 Hz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

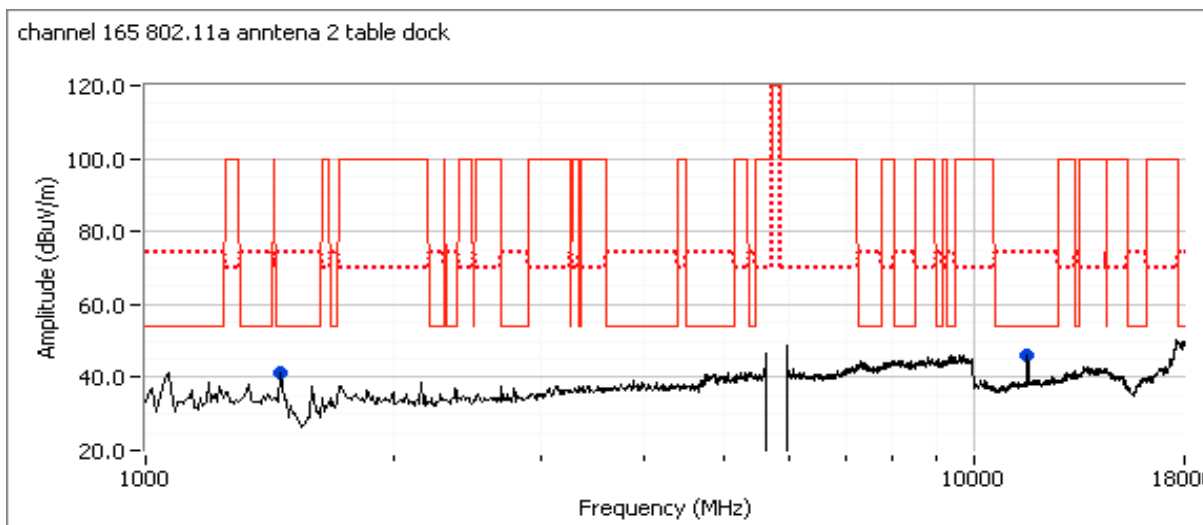
Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4b: Channel 165, 5825MHz, 802.11a, Antenna 2

Fundamental Signal Field Strength: Peak values measured in 100kHz

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5825.200	94.3	V	120.0	-25.7	AVG	339	1.0	RB 1 MHz;VB 10 Hz;Pk
5824.930	97.1	V	120.0	-22.9	PK	339	1.0	RB 1 MHz;VB 3 MHz;Pk
5821.400	84.0	V	120.0	-36.0	-	339	1.0	RB 100 kHz;VB 100 kHz;Pk
5825.200	95.1	H	120.0	-24.9	AVG	227	1.0	RB 1 MHz;VB 10 Hz;Pk
5825.000	98.5	H	120.0	-21.5	PK	227	1.0	RB 1 MHz;VB 3 MHz;Pk
5828.270	82.3	H	120.0	-37.7	-	227	1.0	RB 100 kHz;VB 100 kHz;Pk

Fundamental emission level @ 3m in 100kHz RBW:	84	dB μ V/m	
Limit for emissions outside of restricted bands:	54	dB μ V/m	Limit is -30dBc (UNII power measurement)



Other Spurious Emissions

Frequency	Level	Pol	15.209 / 15.247		Detector	Azimuth	Height	Comments
MHz	dB μ V/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
11650.410	40.1	V	54.0	-13.9	AVG	325	1.0	RB 1 MHz;VB 10 Hz;Pk
1464.970	37.1	V	54.0	-16.9	AVG	199	1.3	RB 1 MHz;VB 10 Hz;Pk
11651.140	49.4	V	74.0	-24.6	PK	325	1.0	RB 1 MHz;VB 3 MHz;Pk
1462.980	43.1	V	74.0	-30.9	PK	199	1.3	RB 1 MHz;VB 3 MHz;Pk

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

RSS 210 - Receiver Radiated Spurious Emissions

Summary of Results

EUT tested on center frequency in each band. Frequency range 30 - 1000 MHz covered by digital device measurements, no spurious related directly to the receiver or transmitter were observed in that frequency range.

Run #	Mode	Channel	-	Antenna	Test Performed	Limit	Result / Margin
EUT flat on table							
1a	Receive	2437MHz		1	Radiated Emissions, 1 - 7.5 GHz	RSS 210 FCC 15.109	42.1dBµV/m @ 1062.8MHz (-11.9dB)
1b				2			
1c		5200MHz		1	Radiated Emissions, 1 - 18 GHz		39.3dBµV/m @ 1465.7MHz (-14.7dB)
1d				2			
1e		5785MHz		1			39.2dBµV/m @ 1465.9MHz (-14.8dB)
1f				2			
EUT in table dock							
2a	Receive	2437MHz		1	Radiated Emissions, 1 - 7.5 GHz	RSS 210 FCC 15.109	43.9dBµV/m @ 1465.5MHz (-10.1dB)
2b				2			
2c		5200MHz		1	Radiated Emissions, 1 - 18 GHz		43.9dBµV/m @ 1465.5MHz (-10.1dB)
2d				2			
2e		5785MHz		1			41.1dBµV/m @ 1465.5MHz (-12.9dB)
2f				2			
EUT in wall dock							
3a	Receive	2437MHz		1	Radiated Emissions, 1 - 7.5 GHz	RSS 210 FCC 15.109	40.5dBµV/m @ 1063.4MHz (-13.5dB)
3b				2			
3c		5200MHz		1	Radiated Emissions, 1 - 18 GHz		42.1dBµV/m @ 1465.5MHz (-11.9dB)
3d				2			
3e		5785MHz		1			40.9dBµV/m @ 1465.3MHz (-13.1dB)
3f				2			

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Ambient Conditions:

Temperature: 23 °C
Rel. Humidity: 42 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

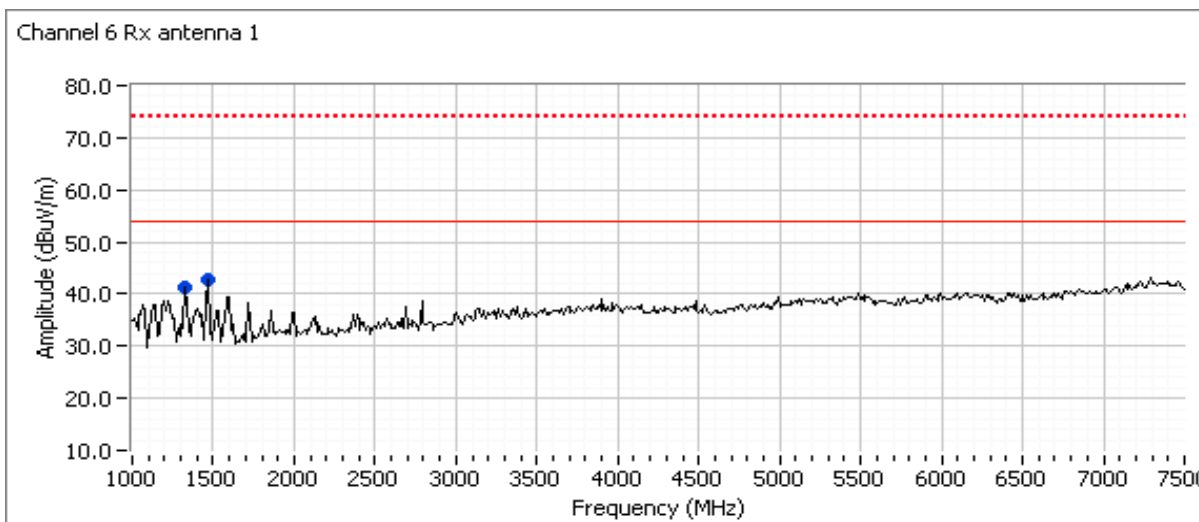
No deviations were made from the requirements of the standard.

Run #1: Radiated Spurious Emissions, Receive Mode - EUT Flat on Table

Date of Test: 8/26/2010
Test Engineer: Joseph Cadigal
Test Location: FT Chamber#5

Run #1a: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 1

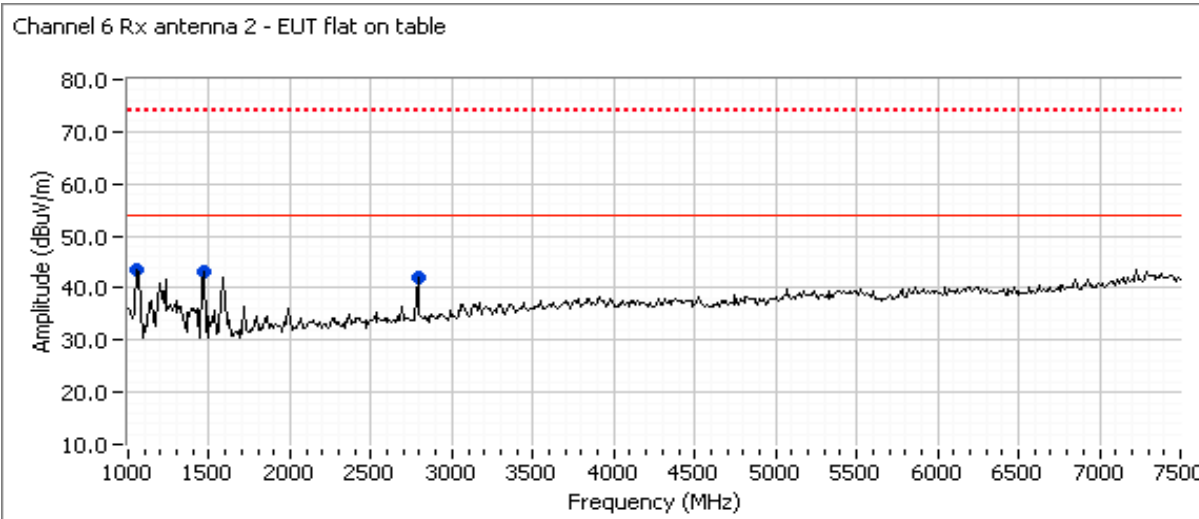
Frequency MHz	Level dB μ V/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1328.500	39.5	V	54.0	-14.5	AVG	238	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.970	38.8	H	54.0	-15.2	AVG	281	1.6	RB 1 MHz;VB 10 Hz;Pk
1328.710	49.2	V	74.0	-24.8	PK	238	1.0	RB 1 MHz;VB 3 MHz;Pk
1467.440	39.2	H	74.0	-34.8	PK	281	1.6	RB 1 MHz;VB 3 MHz;Pk



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

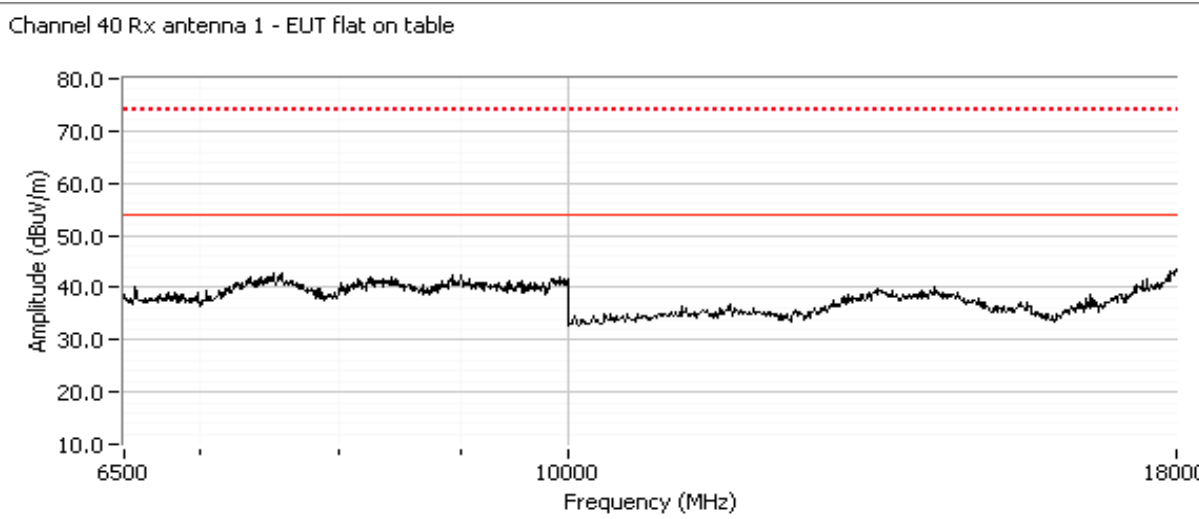
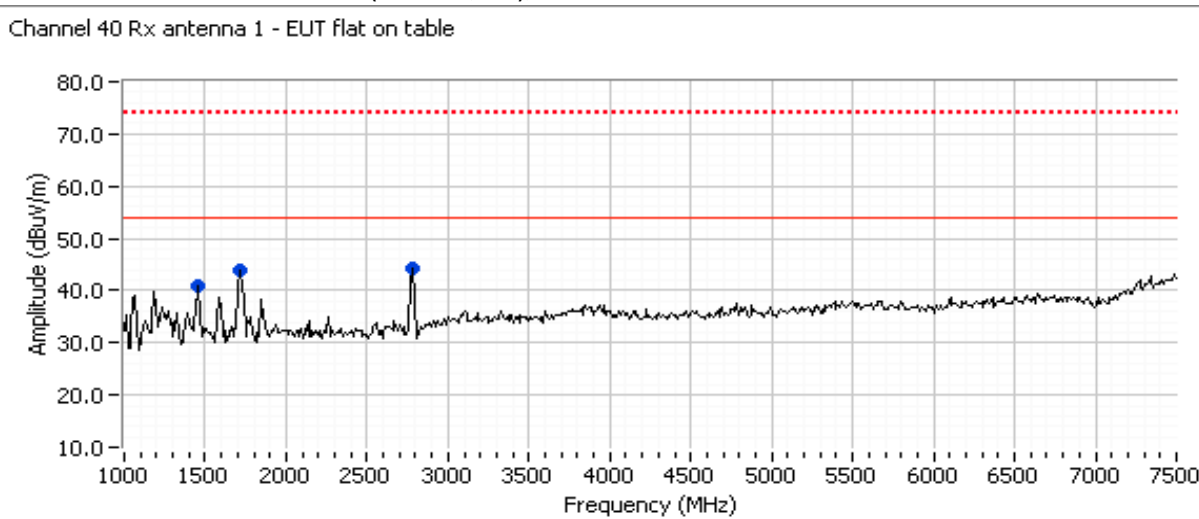
Run #1b: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 2

Frequency MHz	Level dB μ V/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1062.770	42.1	V	54.0	-11.9	AVG	241	1.0	RB 1 MHz;VB 10 Hz;Pk
2786.220	30.0	V	54.0	-24.0	AVG	223	1.6	RB 1 MHz;VB 10 Hz;Pk
1062.400	48.7	V	74.0	-25.3	PK	241	1.0	RB 1 MHz;VB 3 MHz;Pk
1475.840	27.8	H	54.0	-26.2	AVG	285	1.6	RB 1 MHz;VB 10 Hz;Pk
2784.790	41.1	V	74.0	-32.9	PK	223	1.6	RB 1 MHz;VB 3 MHz;Pk
1473.810	38.4	H	74.0	-35.6	PK	285	1.6	RB 1 MHz;VB 3 MHz;Pk



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

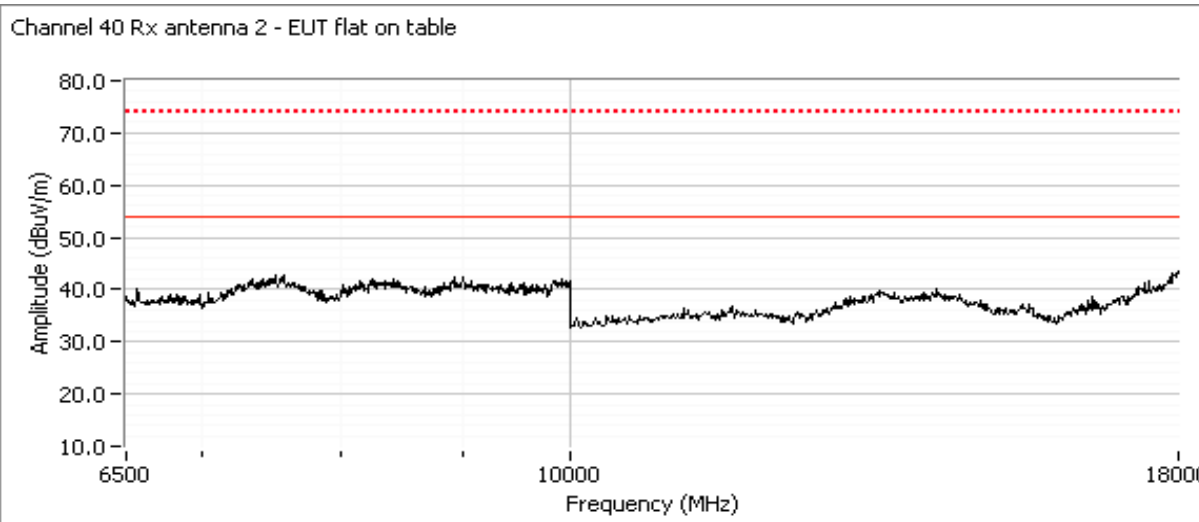
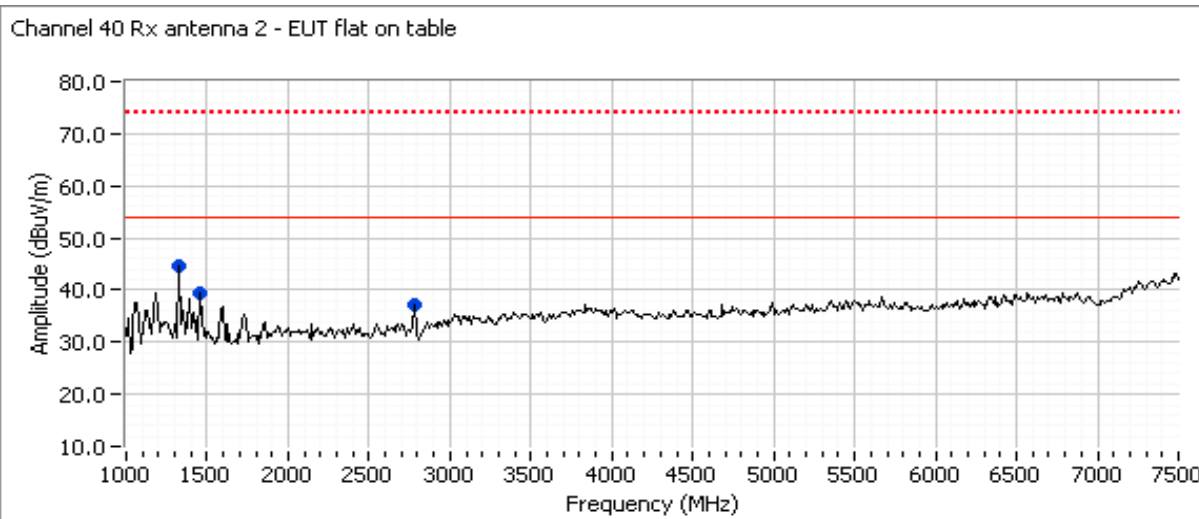
Run #1c: 5150-5250 MHz center channel (5200MHz, #40), Antenna 1



Frequency MHz	Level dB μ V/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.650	39.3	H	54.0	-14.7	AVG	213	1.0	RB 1 MHz;VB 10 Hz;Pk
1715.180	33.6	H	54.0	-20.4	AVG	251	1.0	RB 1 MHz;VB 10 Hz;Pk
2780.590	30.9	H	54.0	-23.1	AVG	266	1.0	RB 1 MHz;VB 10 Hz;Pk
1464.450	44.2	H	74.0	-29.8	PK	213	1.0	RB 1 MHz;VB 3 MHz;Pk
2778.460	42.6	H	74.0	-31.4	PK	266	1.0	RB 1 MHz;VB 3 MHz;Pk
1715.670	41.2	H	74.0	-32.8	PK	251	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

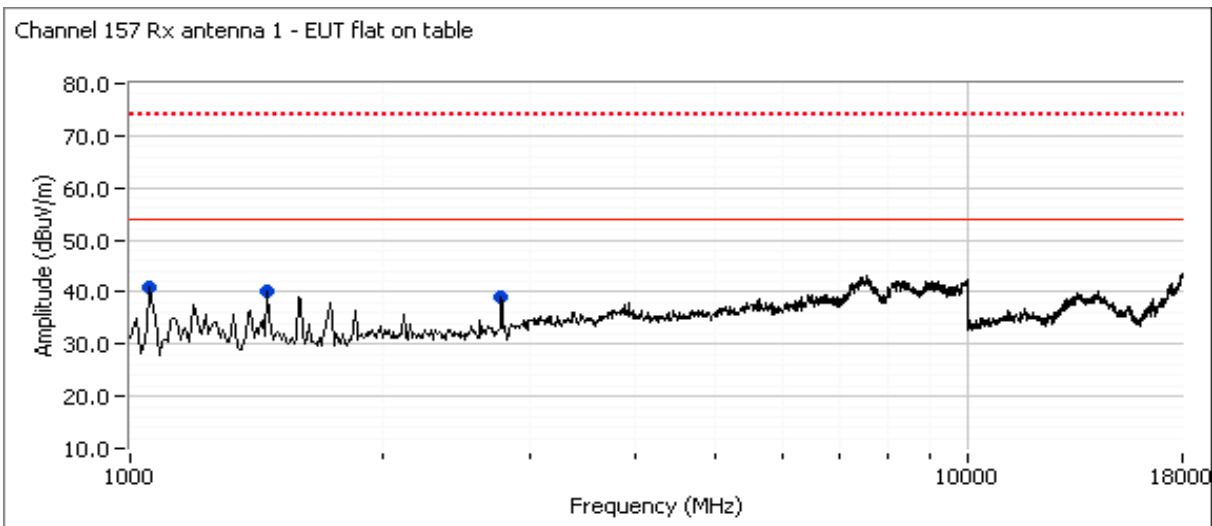
Run #1d: 5150-5250 MHz center channel (5200MHz, #40), Antenna 2



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector PK/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.330	33.6	V	54.0	-20.4	AVG	272	1.9	RB 1 MHz;VB 10 Hz;Pk
1327.820	33.4	V	54.0	-20.6	AVG	262	1.0	RB 1 MHz;VB 10 Hz;Pk
2775.900	28.1	H	54.0	-25.9	AVG	211	1.3	RB 1 MHz;VB 10 Hz;Pk
1326.720	42.4	V	74.0	-31.6	PK	262	1.0	RB 1 MHz;VB 3 MHz;Pk
2774.290	39.4	H	74.0	-34.6	PK	211	1.3	RB 1 MHz;VB 3 MHz;Pk
1464.090	37.0	V	74.0	-37.0	PK	272	1.9	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1e: 5725-5850 MHz center channel (5785MHz, #157), Antenna 1



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.890	39.2	V	54.0	-14.8	AVG	185	1.0	RB 1 MHz;VB 10 Hz;Pk
1062.150	30.4	V	54.0	-23.6	AVG	254	1.9	RB 1 MHz;VB 10 Hz;Pk
2778.150	28.6	H	54.0	-25.4	AVG	271	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.550	44.2	V	74.0	-29.8	PK	185	1.0	RB 1 MHz;VB 3 MHz;Pk
2776.940	39.6	H	74.0	-34.4	PK	271	1.0	RB 1 MHz;VB 3 MHz;Pk
1062.840	39.0	V	74.0	-35.0	PK	254	1.9	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1f: 5725-5850 MHz center channel (5785MHz, #157), Antenna 2



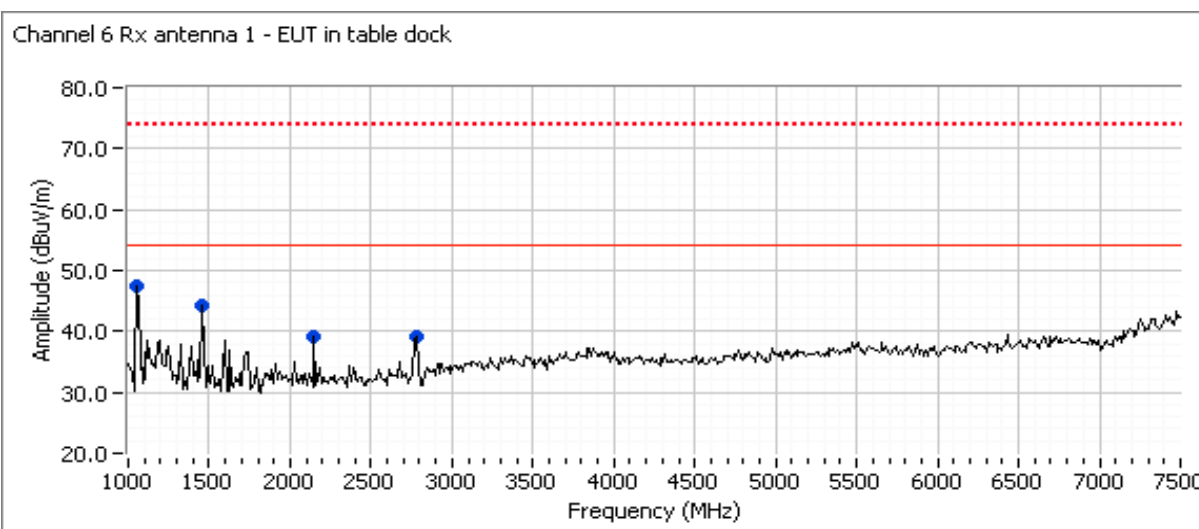
Frequency MHz	Level dBµV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1058.190	33.3	V	54.0	-20.7	AVG	72	2.5	RB 1 MHz;VB 10 Hz;Pk
2789.350	32.6	V	54.0	-21.4	AVG	137	1.5	RB 1 MHz;VB 10 Hz;Pk
2789.060	49.4	V	74.0	-24.6	PK	137	1.5	RB 1 MHz;VB 3 MHz;Pk
1456.460	29.0	V	54.0	-25.0	AVG	236	1.2	RB 1 MHz;VB 10 Hz;Pk
1059.680	41.9	V	74.0	-32.1	PK	72	2.5	RB 1 MHz;VB 3 MHz;Pk
1456.190	40.4	V	74.0	-33.6	PK	236	1.2	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: Radiated Spurious Emissions, Receive Mode - EUT in Table Dock

Date of Test: 8/30/2010
 Test Engineer: Joseph Cadigal
 Test Location: FT Chamber#4

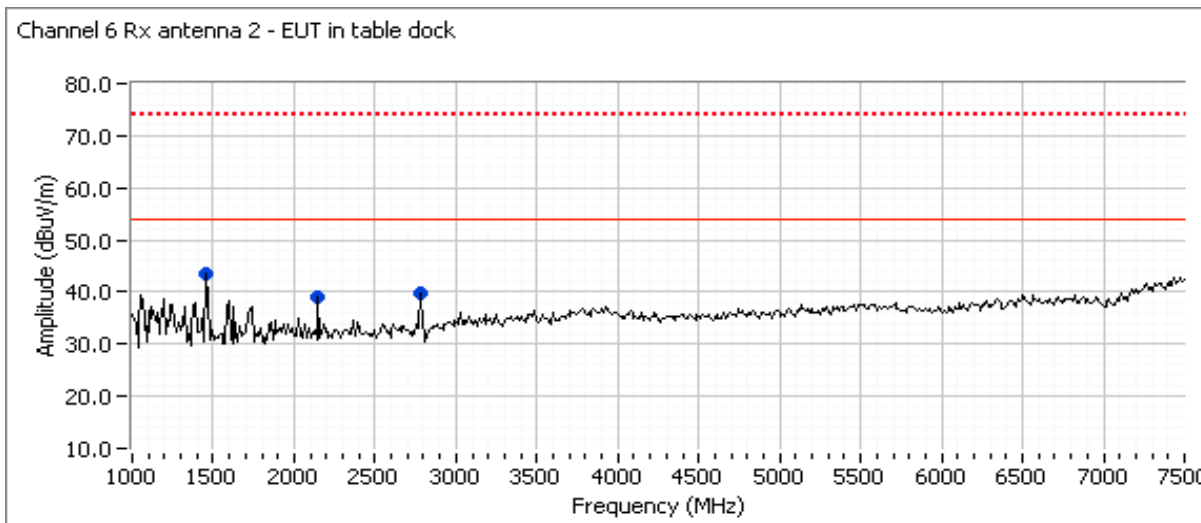
Run #2a: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 1



Frequency MHz	Level dBµV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.450	43.9	V	54.0	-10.1	AVG	241	1.3	RB 1 MHz;VB 10 Hz;Pk
2778.450	30.8	V	54.0	-23.2	AVG	177	1.0	RB 1 MHz;VB 10 Hz;Pk
1048.900	29.5	H	54.0	-24.5	AVG	217	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.330	47.3	V	74.0	-26.7	PK	241	1.3	RB 1 MHz;VB 3 MHz;Pk
2158.320	26.5	H	54.0	-27.5	AVG	187	1.0	RB 1 MHz;VB 10 Hz;Pk
2779.760	43.8	V	74.0	-30.2	PK	177	1.0	RB 1 MHz;VB 3 MHz;Pk
1048.550	37.9	H	74.0	-36.1	PK	217	1.0	RB 1 MHz;VB 3 MHz;Pk
2156.760	36.9	H	74.0	-37.1	PK	187	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

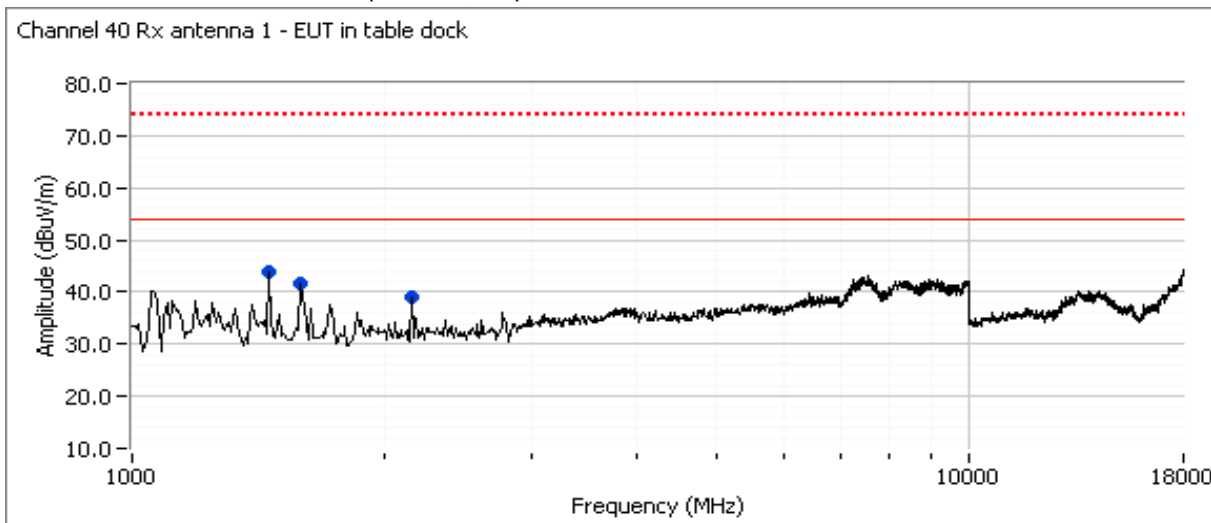
Run #2b: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 2



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.450	43.3	V	54.0	-10.7	AVG	238	1.2	RB 1 MHz;VB 10 Hz;Pk
2787.880	35.0	V	54.0	-19.0	AVG	129	1.0	RB 1 MHz;VB 10 Hz;Pk
2786.040	48.2	V	74.0	-25.8	PK	129	1.0	RB 1 MHz;VB 3 MHz;Pk
1465.420	46.7	V	74.0	-27.3	PK	238	1.2	RB 1 MHz;VB 3 MHz;Pk
2136.260	26.3	H	54.0	-27.7	AVG	175	1.3	RB 1 MHz;VB 10 Hz;Pk
2137.000	37.4	H	74.0	-36.6	PK	175	1.3	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

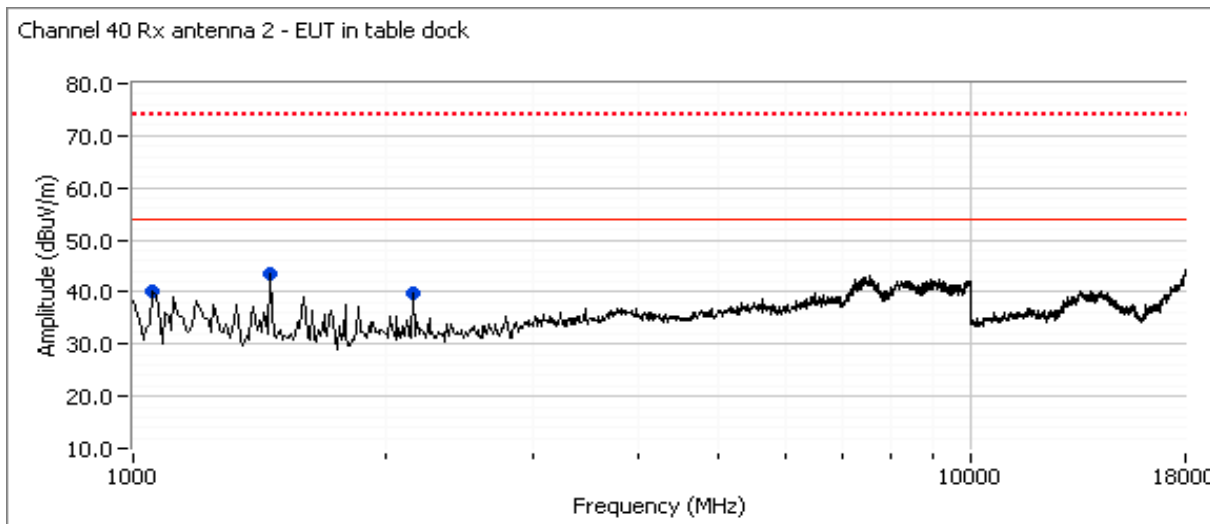
Run #2c: 5150-5250 MHz center channel (5200MHz, #40), Antenna 1



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.500	43.2	V	54.0	-10.8	AVG	235	1.3	RB 1 MHz;VB 10 Hz;Pk
2159.980	38.5	H	54.0	-15.5	AVG	183	1.0	RB 1 MHz;VB 10 Hz;Pk
1596.410	32.5	H	54.0	-21.5	AVG	246	1.3	RB 1 MHz;VB 10 Hz;Pk
1465.580	47.1	V	74.0	-26.9	PK	235	1.3	RB 1 MHz;VB 3 MHz;Pk
2160.220	43.7	H	74.0	-30.3	PK	183	1.0	RB 1 MHz;VB 3 MHz;Pk
1594.490	41.3	H	74.0	-32.7	PK	246	1.3	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

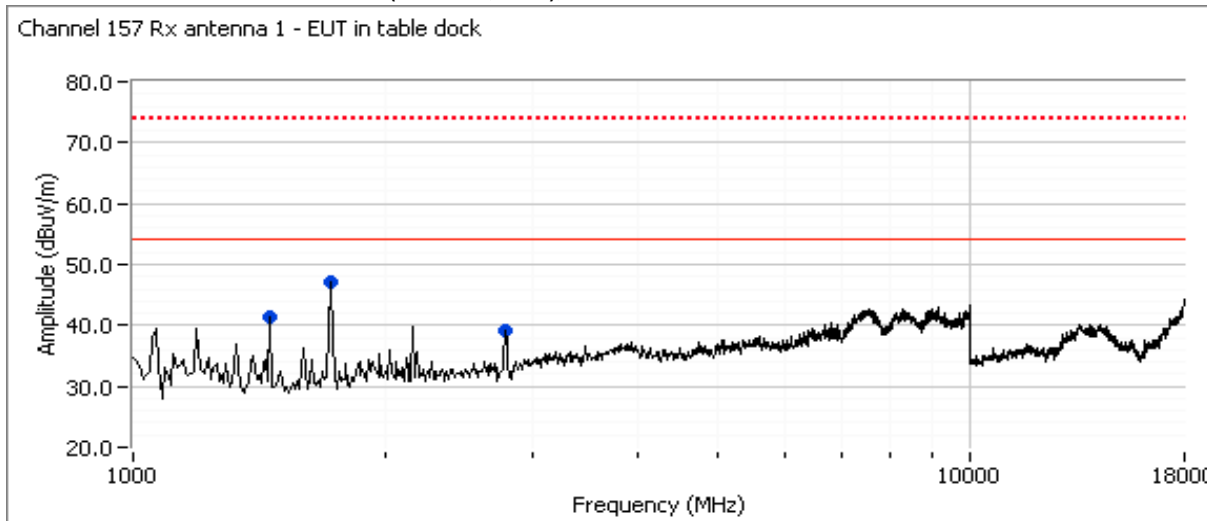
Run #2d: 5150-5250 MHz center channel (5200MHz, #40), Antenna 2



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.460	43.9	V	54.0	-10.1	AVG	241	1.3	RB 1 MHz;VB 10 Hz;Pk
2160.030	37.3	H	54.0	-16.7	AVG	185	1.0	RB 1 MHz;VB 10 Hz;Pk
1049.390	33.4	V	54.0	-20.6	AVG	156	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.480	48.2	V	74.0	-25.8	PK	241	1.3	RB 1 MHz;VB 3 MHz;Pk
2160.300	43.2	H	74.0	-30.8	PK	185	1.0	RB 1 MHz;VB 3 MHz;Pk
1048.320	42.7	V	74.0	-31.3	PK	156	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

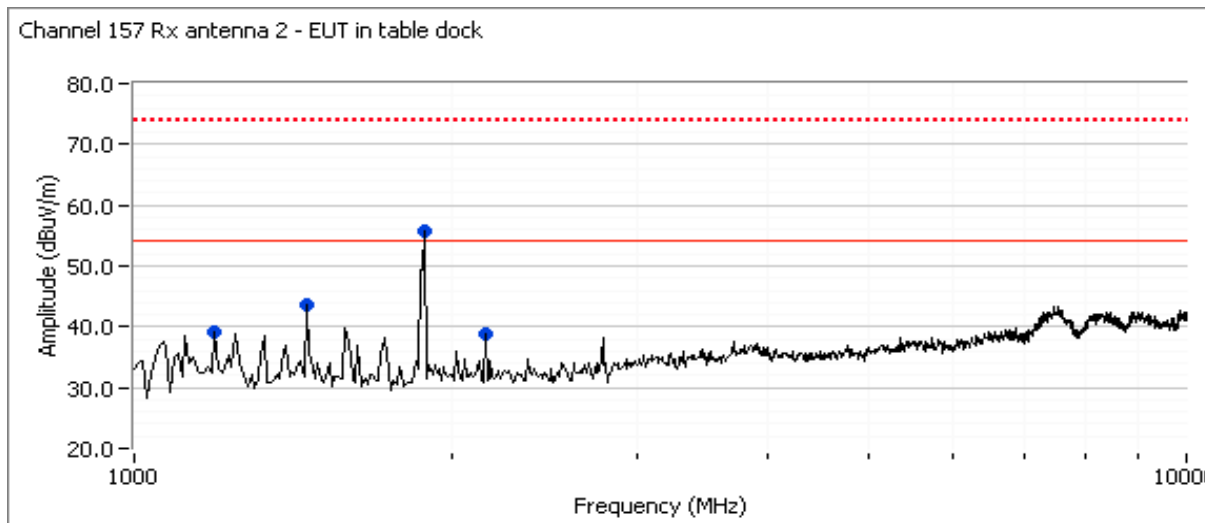
Run #2e: 5725-5850 MHz center channel (5785MHz, #257), Antenna 1



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
2160.040	37.0	H	54.0	-17.0	AVG	185	1.3	RB 1 MHz;VB 10 Hz;Pk
1714.220	28.0	V	54.0	-26.0	AVG	109	1.0	RB 1 MHz;VB 10 Hz;Pk
1466.080	26.4	V	54.0	-27.6	AVG	230	1.3	RB 1 MHz;VB 10 Hz;Pk
2159.940	42.7	H	74.0	-31.3	PK	185	1.3	RB 1 MHz;VB 3 MHz;Pk
1714.680	40.1	V	74.0	-33.9	PK	109	1.0	RB 1 MHz;VB 3 MHz;Pk
1464.650	37.0	V	74.0	-37.0	PK	230	1.3	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2f: 5725-5850 MHz center channel (5785MHz, #257), Antenna 2

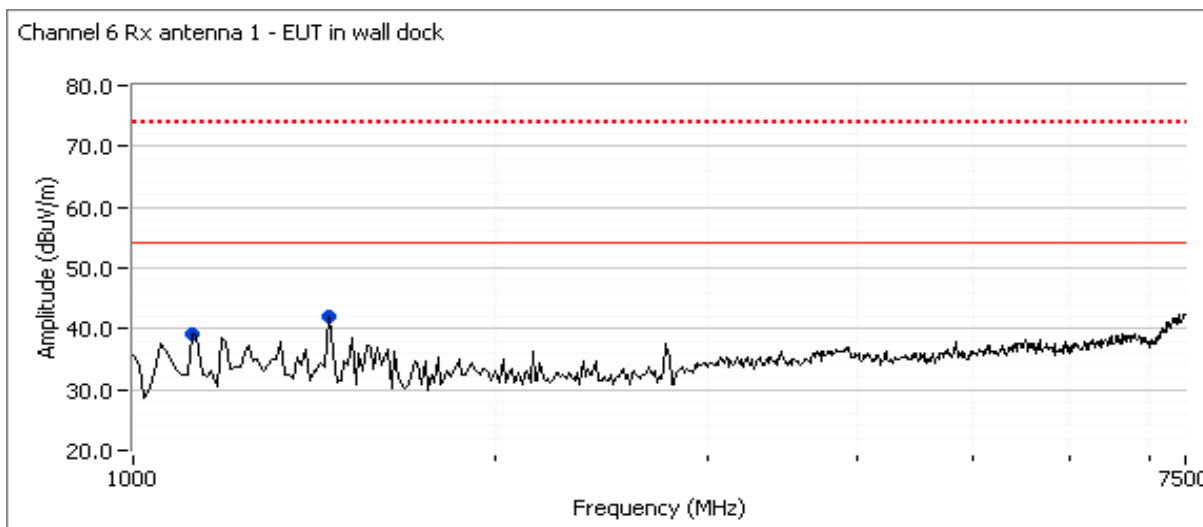


Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.470	41.1	V	54.0	-12.9	AVG	197	1.3	RB 1 MHz;VB 10 Hz;Pk
2160.050	37.4	H	54.0	-16.6	AVG	174	1.6	RB 1 MHz;VB 10 Hz;Pk
1199.030	36.4	H	54.0	-17.6	AVG	234	1.3	RB 1 MHz;VB 10 Hz;Pk
1882.290	26.5	H	54.0	-27.5	AVG	64	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.390	44.7	V	74.0	-29.3	PK	197	1.3	RB 1 MHz;VB 3 MHz;Pk
2159.940	43.2	H	74.0	-30.8	PK	174	1.6	RB 1 MHz;VB 3 MHz;Pk
1199.000	43.1	H	74.0	-30.9	PK	234	1.3	RB 1 MHz;VB 3 MHz;Pk
1883.100	37.8	H	74.0	-36.2	PK	64	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3: Radiated Spurious Emissions, Receive Mode - EUT in Table Dock

Date of Test: 8/30/2010
 Test Engineer: Rafael Varelas
 Test Location: FT Chamber#4

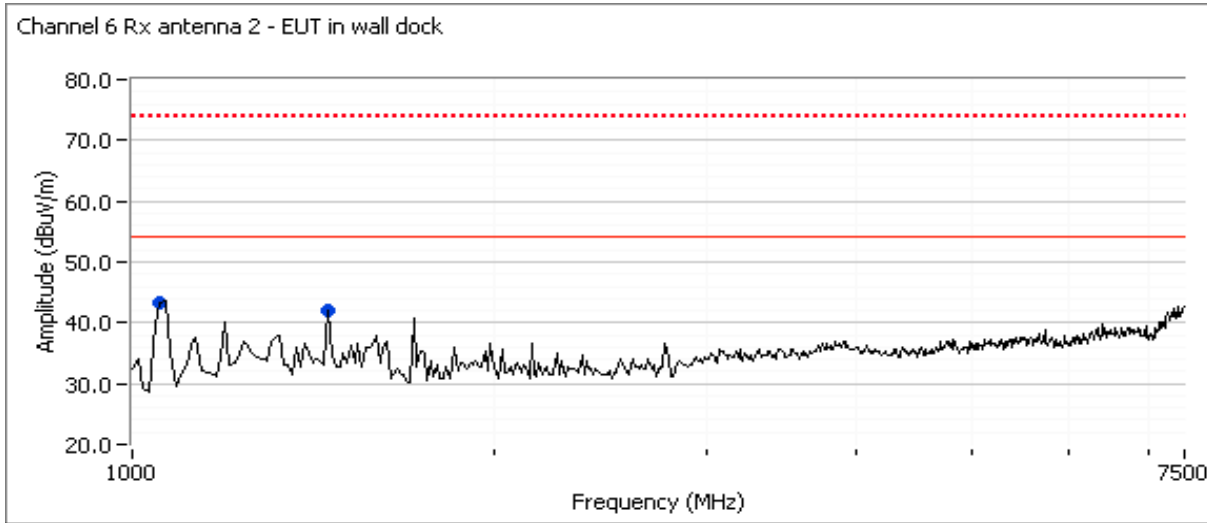


Run #3a: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 1

Frequency MHz	Level dB μ V/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.490	40.4	V	54.0	-13.6	AVG	275	1.8	RB 1 MHz;VB 10 Hz;Pk
1126.410	34.0	V	54.0	-20.0	AVG	184	1.0	RB 1 MHz;VB 10 Hz;Pk
1129.010	43.4	V	74.0	-30.6	PK	184	1.0	RB 1 MHz;VB 3 MHz;Pk
1465.460	43.1	V	74.0	-30.9	PK	275	1.8	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

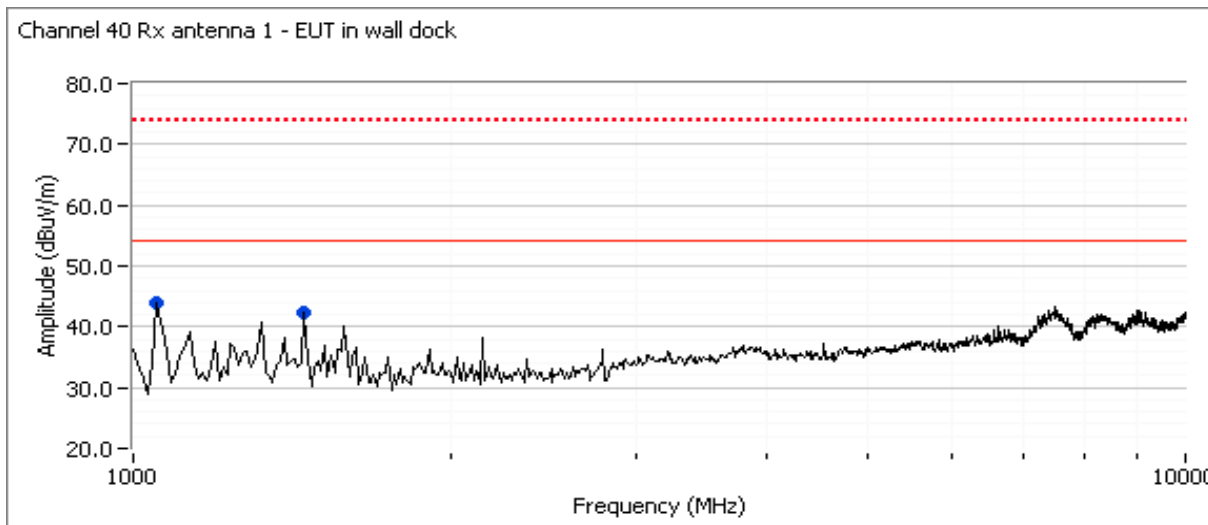
Run #3b: 2400-2483.5MHz center channel (2437MHz, #6), Antenna 2



Frequency MHz	Level dBµV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1063.370	40.5	V	54.0	-13.5	AVG	168	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.440	40.4	V	54.0	-13.6	AVG	256	1.4	RB 1 MHz;VB 10 Hz;Pk
1065.670	47.2	V	74.0	-26.8	PK	168	1.0	RB 1 MHz;VB 3 MHz;Pk
1465.470	43.8	V	74.0	-30.2	PK	256	1.4	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

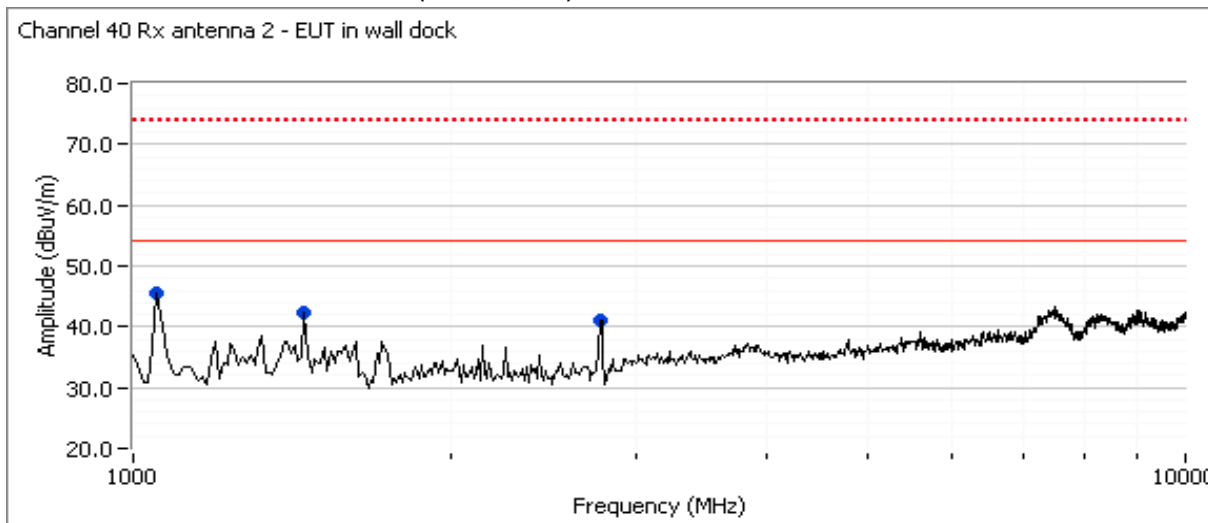
Run #3c: 5150-5250 MHz center channel (5200MHz, #40), Antenna 1



Frequency MHz	Level dBµV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.520	41.5	V	54.0	-12.5	AVG	286	1.0	RB 1 MHz;VB 10 Hz;Pk
1074.530	29.8	H	54.0	-24.2	AVG	227	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.390	45.0	V	74.0	-29.0	PK	286	1.0	RB 1 MHz;VB 3 MHz;Pk
1070.500	40.9	H	74.0	-33.1	PK	227	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

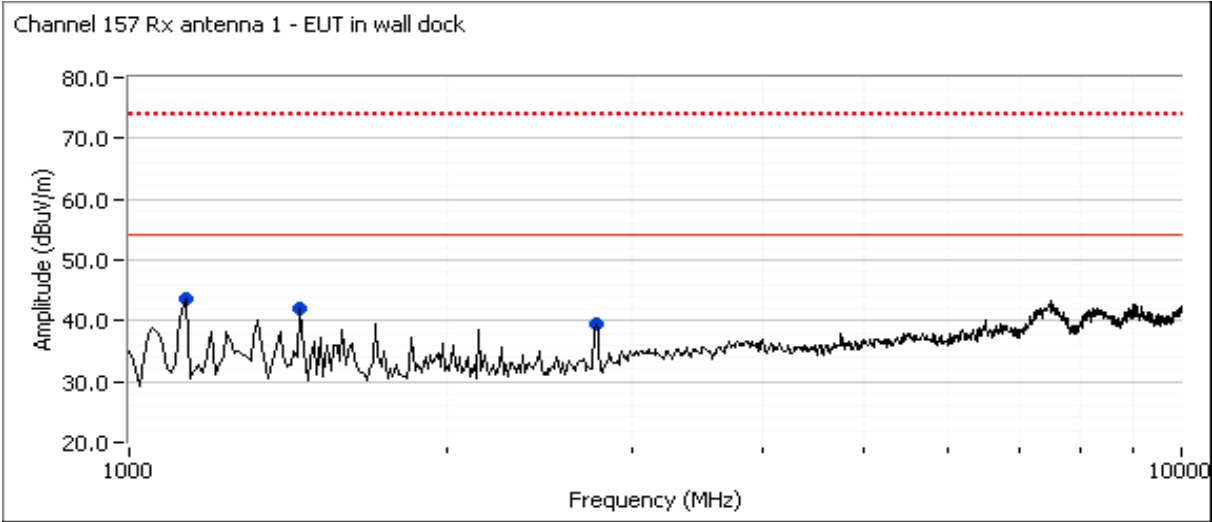
Run #3d: 5150-5250 MHz center channel (5200MHz, #40), Antenna 2



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.520	42.1	V	54.0	-11.9	AVG	206	1.1	RB 1 MHz;VB 10 Hz;Pk
1071.320	34.3	V	54.0	-19.7	AVG	169	1.0	RB 1 MHz;VB 10 Hz;Pk
2799.390	30.9	V	54.0	-23.1	AVG	124	1.0	RB 1 MHz;VB 10 Hz;Pk
1073.090	50.7	V	74.0	-23.3	PK	169	1.0	RB 1 MHz;VB 3 MHz;Pk
1465.490	44.5	V	74.0	-29.5	PK	206	1.1	RB 1 MHz;VB 3 MHz;Pk
2797.850	40.1	V	74.0	-33.9	PK	124	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

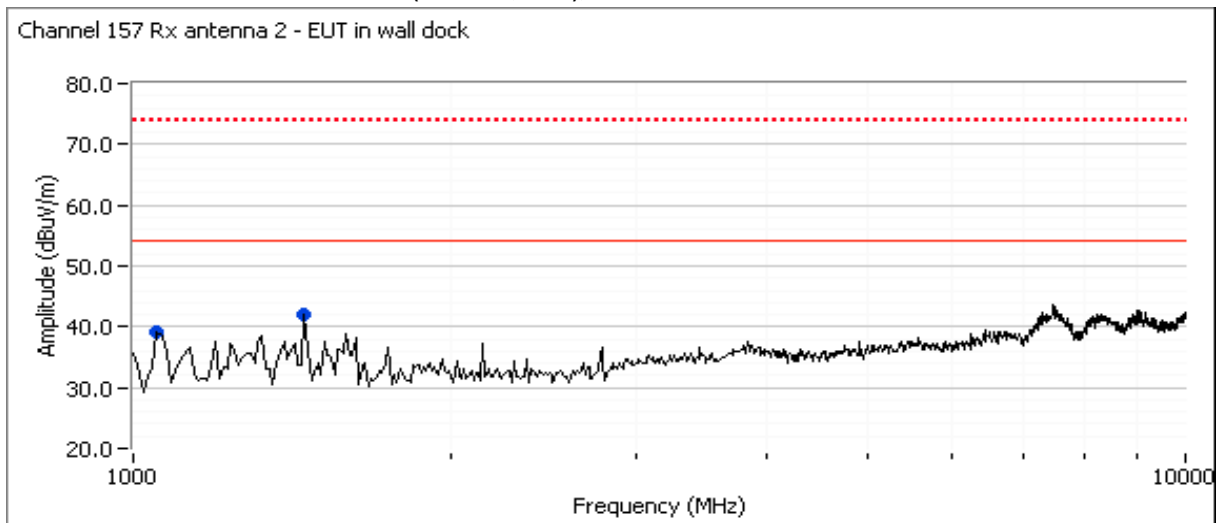
Run #3e: 5725-5850 MHz center channel (5785MHz, #157), Antenna 1



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.520	40.2	V	54.0	-13.8	AVG	292	1.0	RB 1 MHz;VB 10 Hz;Pk
1130.550	33.9	V	54.0	-20.1	AVG	172	0.9	RB 1 MHz;VB 10 Hz;Pk
2807.990	29.6	H	54.0	-24.4	AVG	337	1.0	RB 1 MHz;VB 10 Hz;Pk
1465.460	44.5	V	74.0	-29.5	PK	292	1.0	RB 1 MHz;VB 3 MHz;Pk
1115.890	41.5	V	74.0	-32.5	PK	172	0.9	RB 1 MHz;VB 3 MHz;Pk
2802.920	39.7	H	74.0	-34.3	PK	337	1.0	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3f: 5725-5850 MHz center channel (5785MHz, #157), Antenna 2



Frequency MHz	Level dBuV/m	Pol v/h	RSS 210		Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments
			Limit	Margin				
1465.320	40.9	V	54.0	-13.1	AVG	201	1.1	RB 1 MHz;VB 10 Hz;Pk
1080.050	31.0	V	54.0	-23.0	AVG	96	1.2	RB 1 MHz;VB 10 Hz;Pk
1465.490	43.8	V	74.0	-30.2	PK	201	1.1	RB 1 MHz;VB 3 MHz;Pk
1080.250	37.2	V	74.0	-36.8	PK	96	1.2	RB 1 MHz;VB 3 MHz;Pk

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, PSD, Bandwidth and Spurious Emissions**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 9/1/2010	Config. Used: 1
Test Engineer: Joseph Cadigal	Config Change: none
Test Location: Fremont EMC Lab #4	EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 23 °C
Rel. Humidity: 37 %

Summary of Results

b-mode

Run #	Pwr setting	Avg Pwr	Test Performed	Limit	Pass / Fail	Result / Margin
1	18	12.0	Output Power	15.247(b)	Pass	13.2 dBm
2	18	12.0	Power spectral Density (PSD)	15.247(d)	Pass	-12.5 dBm/3kHz
3	18	12.0	Minimum 6dB Bandwidth	15.247(a)	Pass	12 MHz
3	18	12.0	99% Bandwidth	RSS GEN	-	16 MHz
4	18	12.0	Spurious emissions	15.247(b)	Pass	see graphs

g-mode

Run #	Pwr setting	Avg Pwr	Test Performed	Limit	Pass / Fail	Result / Margin
1	18	12.0	Output Power	15.247(b)	Pass	14.8 dBm
2	18	12.0	Power spectral Density (PSD)	15.247(d)	Pass	-11 dBm/3kHz
3	18	12.0	Minimum 6dB Bandwidth	15.247(a)	Pass	16.3 MHz
3	18	12.0	99% Bandwidth	RSS GEN	-	17 MHz
4	18	12.0	Spurious emissions	15.247(b)	Pass	see graphs

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

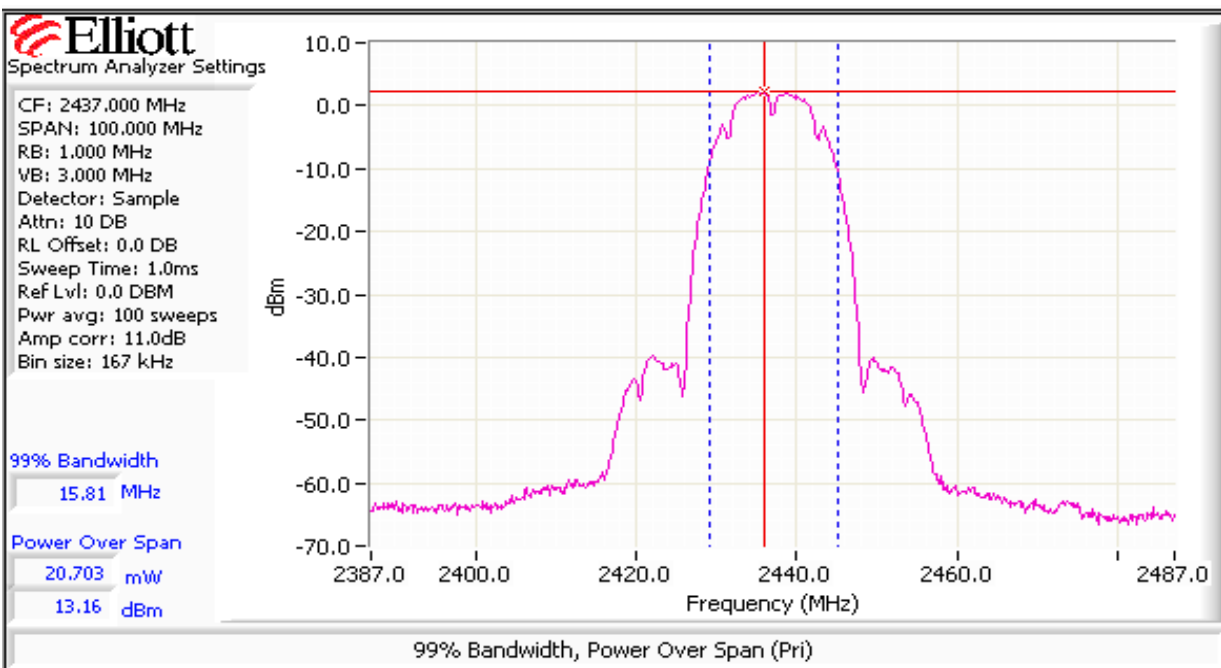
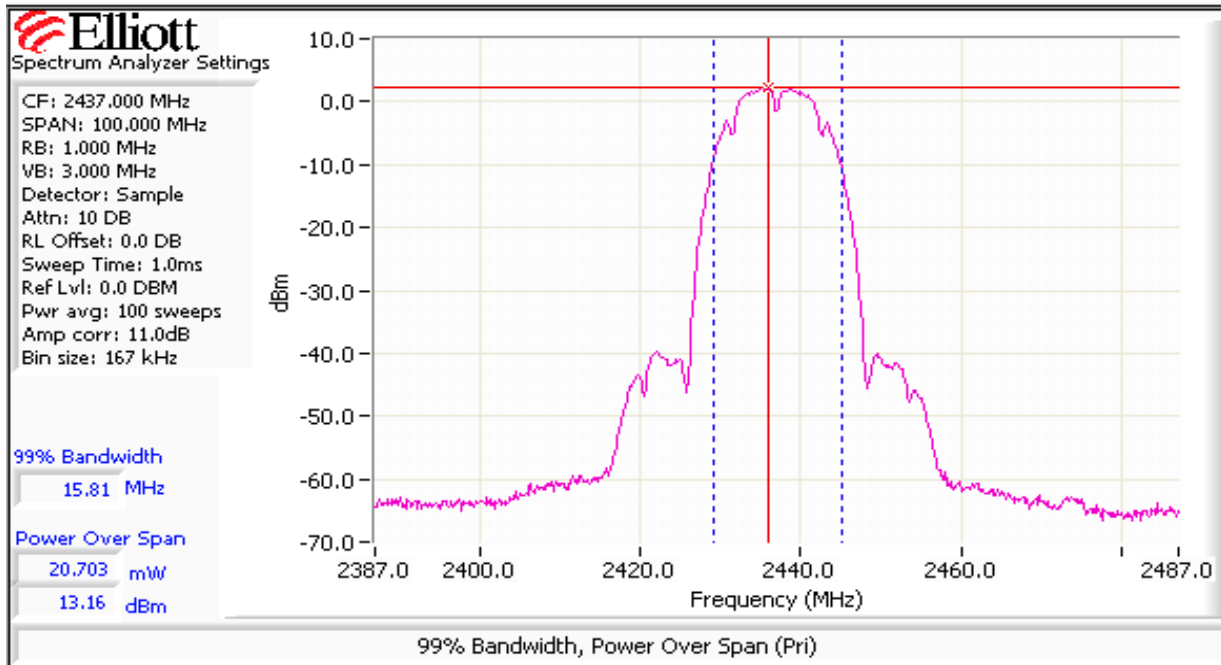
Run #1: Output Power

Measured primary and auxiliary ports on center channel to determine port with least loss, all remaining measurements on that port.

Power Setting ²	Frequency (MHz)	Output Power		Antenna Gain (dBi)	Result	EIRP ^{Note 2}		Output Power	
		(dBm) ¹	mW			dBm	W	(dBm) ³	mW
18.0	2437 (aux) b-mode	13.2	20.7	5.0	Pass	18.2	0.065	12.6	18.2
18.0	2437 (pri) b-mode	13.2	20.9	5.0	Pass	18.2	0.066	12.7	18.6
18.0	2412 (pri) b-mode	13.2	20.9	5.0	Pass	18.2	0.066	12.7	18.6
18.0	2462 (pri) b-mode	12.8	19.1	5.0	Pass	17.8	0.060	12.5	17.8
18.0	2412 (pri) g-mode	13.2	20.9	5.0	Pass	18.2	0.066	12.5	17.8
18.0	2437 (pri) g-mode	14.8	30.2	5.0	Pass	19.8	0.095	14.6	28.8
18.0	2462 (pri) g-mode	9.0	8.0	5.0	Pass	14.0	0.025	8.9	7.8

Note 1:	Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, max hold (transmitted signal was not continuous) and power integration over 40 MHz (option #2, method 3 in KDB 558074, equivalent to method 3 of DA-02-2138A1 for U-NII devices). Spurious limit becomes -30dBc .
Note 2:	Power setting - the software power setting used during testing, included for reference only.
Note 3:	Power measured using average power meter and is included for reference only.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

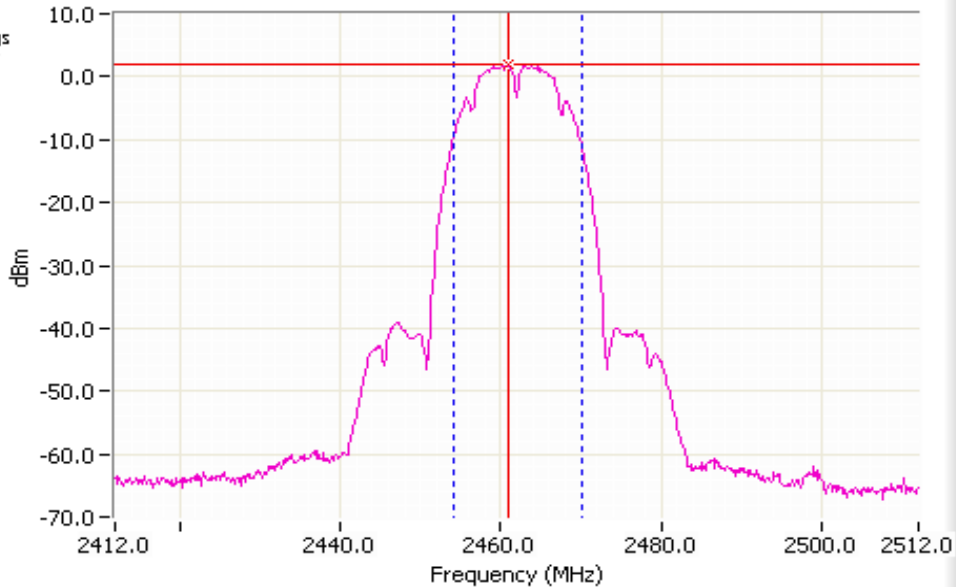


Elliott
Spectrum Analyzer Settings

CF: 2462.000 MHz
 SPAN: 100.000 MHz
 RB: 1.000 MHz
 VB: 3.000 MHz
 Detector: Sample
 Attn: 10 DB
 RL Offset: 0.0 DB
 Sweep Time: 1.0ms
 Ref Lvl: 0.0 DBM
 Pwr avg: 100 sweeps
 Amp corr: 11.0dB
 Bin size: 167 kHz

99% Bandwidth
 15.81 MHz

Power Over Span
 19.251 mW
 12.84 dBm



99% Bandwidth, Power Over Span (Pri)

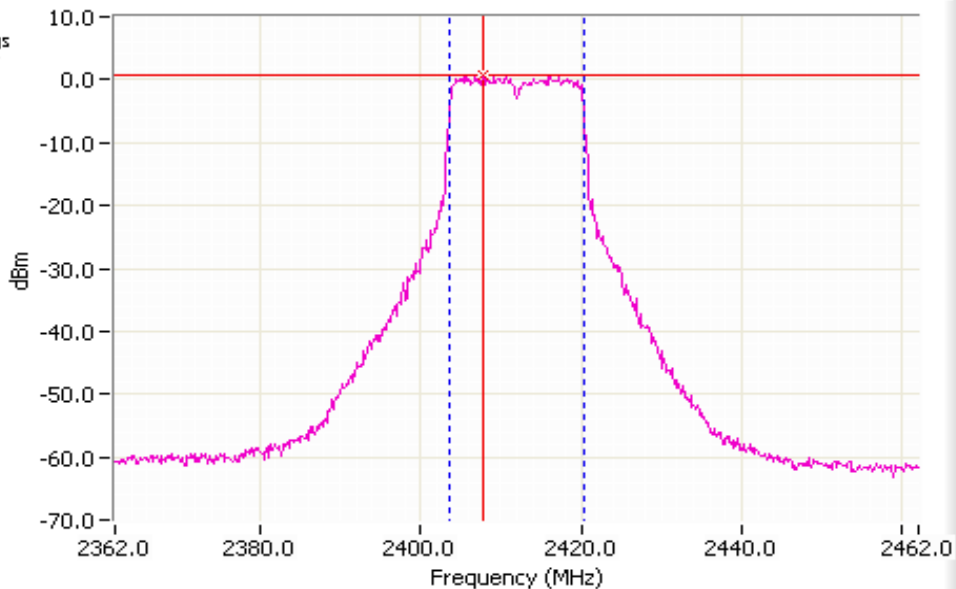


Elliott
Spectrum Analyzer Settings

CF: 2412.000 MHz
 SPAN: 100.000 MHz
 RB: 1.000 MHz
 VB: 3.000 MHz
 Detector: Sample
 Attn: 10 DB
 RL Offset: 0.0 DB
 Sweep Time: 1.0ms
 Ref Lvl: 0.0 DBM
 Pwr avg: 100 sweeps
 Amp corr: 11.0dB
 Bin size: 167 kHz

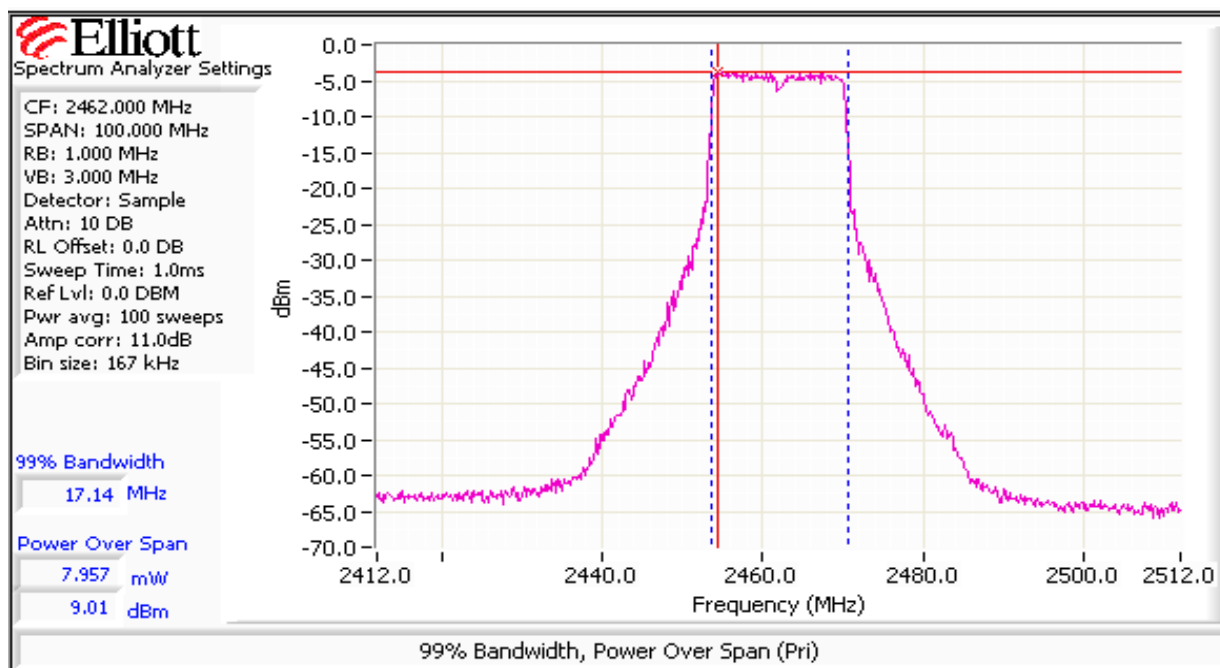
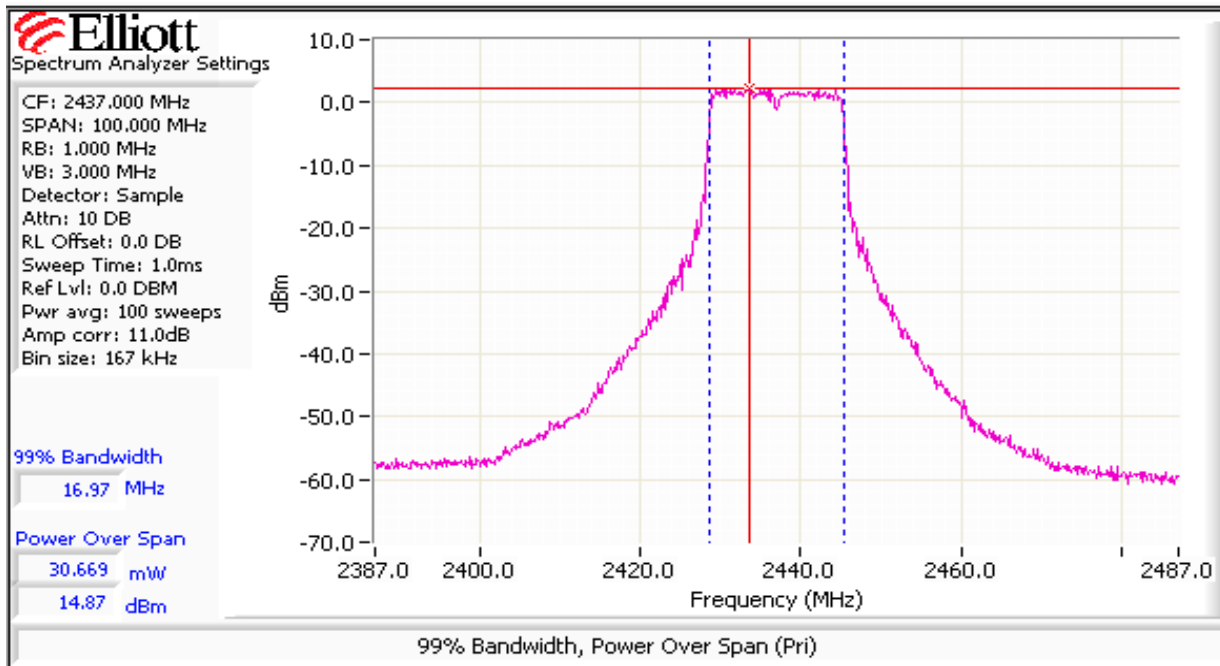
99% Bandwidth
 16.97 MHz

Power Over Span
 20.910 mW
 13.20 dBm



99% Bandwidth, Power Over Span (Pri)

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



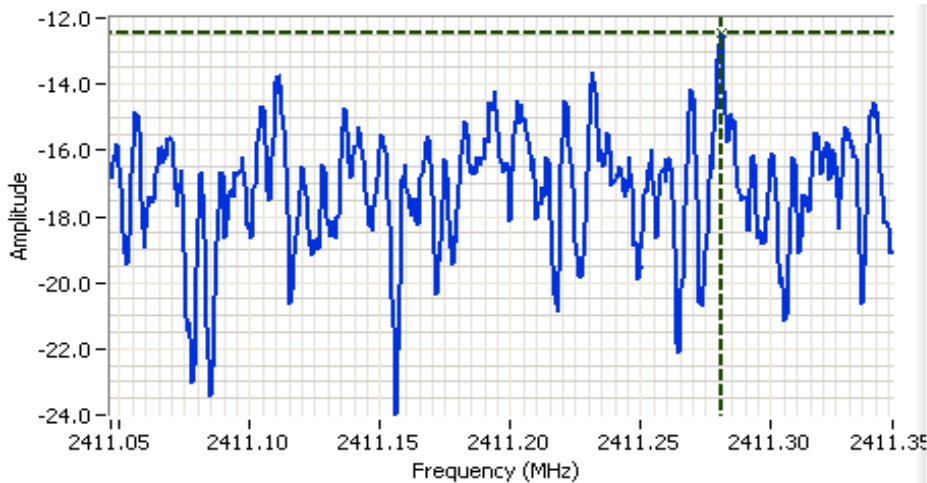
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Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: Power spectral Density

Power Setting	Frequency (MHz)	PSD (dBm/3kHz) ^{Note 1}	Limit dBm/3kHz	Result
18	2412 (pri) b-mode	-12.5	8.0	Pass
18	2437 (pri) b-mode	-12.9	8.0	Pass
18	2462 (pri) b-mode	-13.2	8.0	Pass
18	2412 (pri) g-mode	-13.2	8.0	Pass
18	2437 (pri) g-mode	-11.0	8.0	Pass
18	2462 (pri) g-mode	-16.8	8.0	Pass


Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.

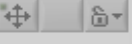
b-mode



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2411.197 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

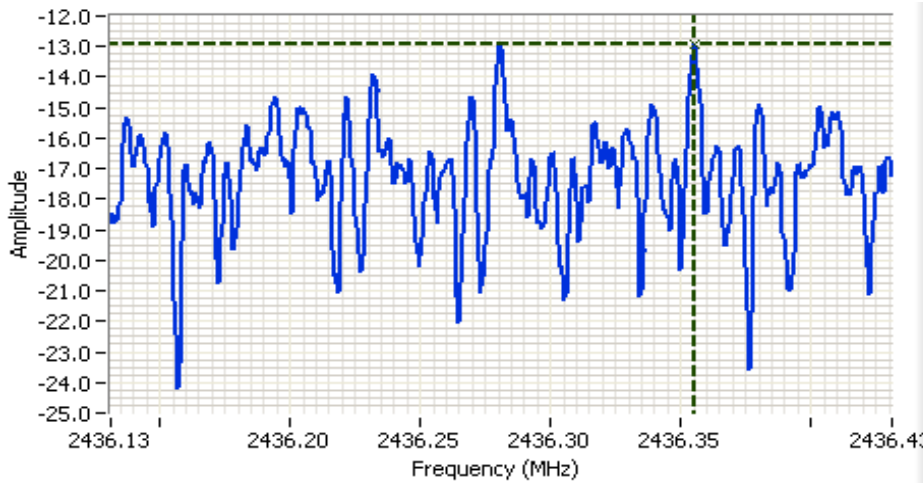
Comments
 PSD : -12.45dBm/3kHz
 Channel 1 b-mode

Cursor 1 2411.2805 -12.45 

0.0000 0.00 

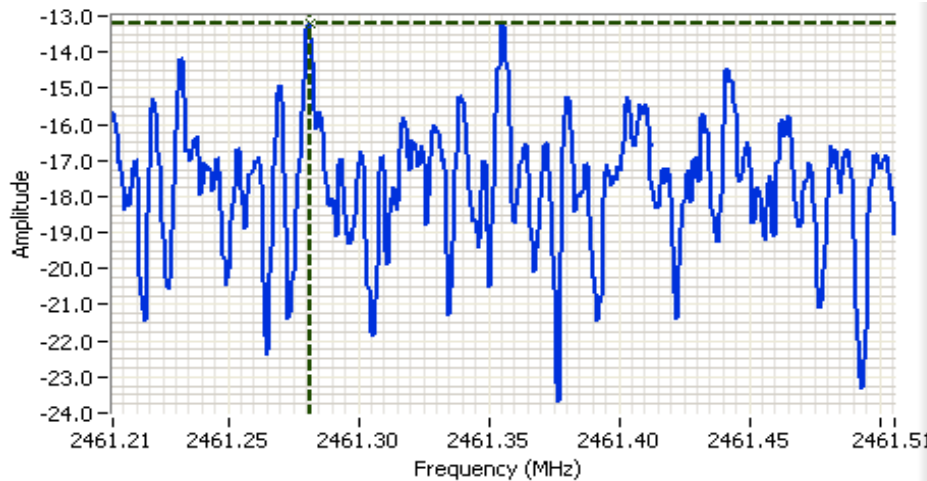
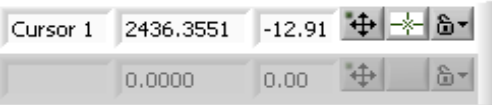


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



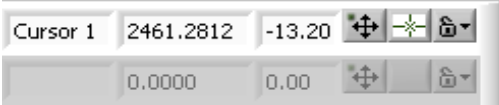
Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2436.281 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments
 PSD : -12.91dBm/3kHz
 Channel 6 b-mode



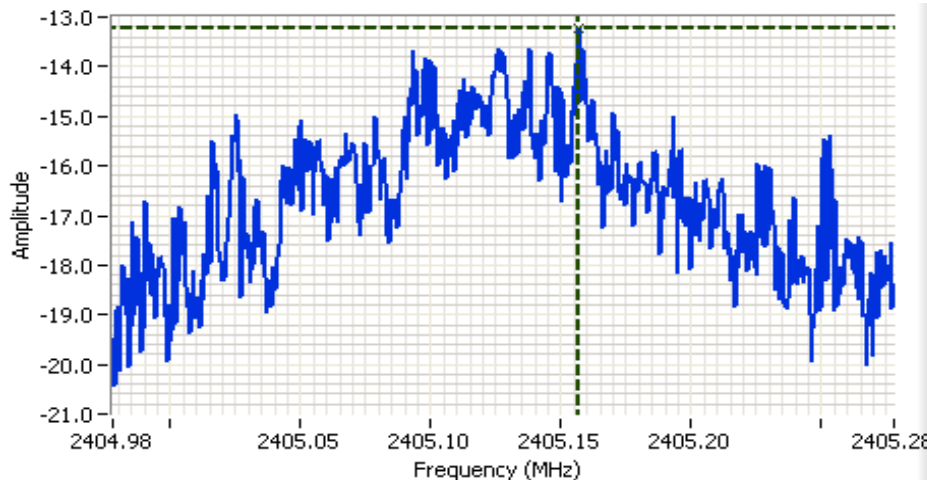
Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2461.356 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments
 PSD : -13.20dBm/3kHz
 Channel 11 b-mode



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

g-mode



Analyzer Settings

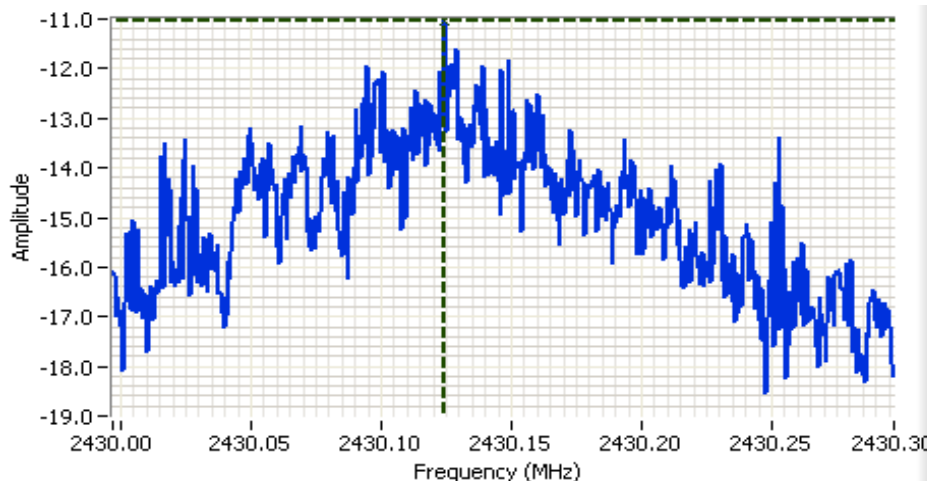
Agilent Technologies, E4446A
 CF: 2405.128 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments

PSD : -13.22dBm/3kHz
 Channel 1 g-mode

Cursor 1 2405.1568 -13.22

0.0000 0.00



Analyzer Settings

Agilent Technologies, E4446A
 CF: 2430.147 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments

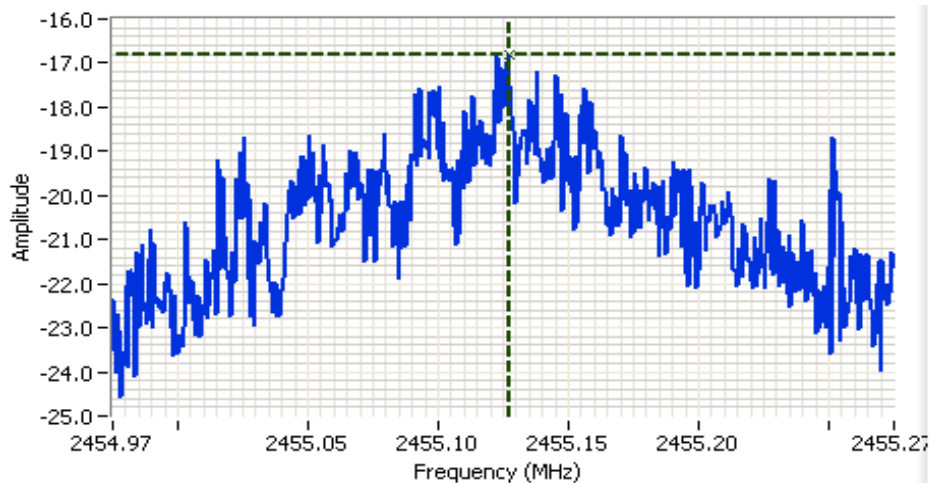
PSD : -11.02dBm/3kHz
 Channel 6 g-mode

Cursor 1 2430.1244 -11.02

0.0000 0.00



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



Analyzer Settings

Agilent Technologies, E4446A
 CF: 2455.125 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments

PSD : -16.80dBm/3kHz
 Channel 11 g-mode

Cursor 1	2455.1269	-16.80	⊕	⊖	⊞	⊟
	0.0000	0.00	⊕	⊖	⊞	⊟



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3: Signal Bandwidth

b-mode

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz)	
			6dB	99%
18	2412 (pri) b-mode	100kHz	12.75	16.0
18	2437 (pri) b-mode	100kHz	12.0	15.8
18	2462 (pri) b-mode	100kHz	12.0	15.8

Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

g-mode

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz)	
			6dB	99%
18	2412 (pri) g-mode	100kHz	16.33	17.0
18	2437 (pri) g-mode	100kHz	16.33	17.0
18	2462 (pri) g-mode	100kHz	16.33	17.1

Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB

b-mode



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2412.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments
 6dB BW: 12.750 MHz
 channel 1

Cursor 1	2418.2500	1.95	Delta Freq.	12.750
Cursor 2	2405.5000	-4.05	Delta Amplitude	6.00



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



Analyzer Settings

Agilent Technologies, E4446A
 CF: 2437.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments

6dB BW: 12.000 MHz
 channel 6

Cursor 1	2443.0000	2.17	
Cursor 2	2431.0000	-3.83	

Delta Freq. 12.000

Delta Amplitude 6.00



Analyzer Settings

Agilent Technologies, E4446A
 CF: 2462.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments

6dB BW: 12.000 MHz
 channel 11

Cursor 1	2468.0000	1.51	
Cursor 2	2456.0000	-4.49	

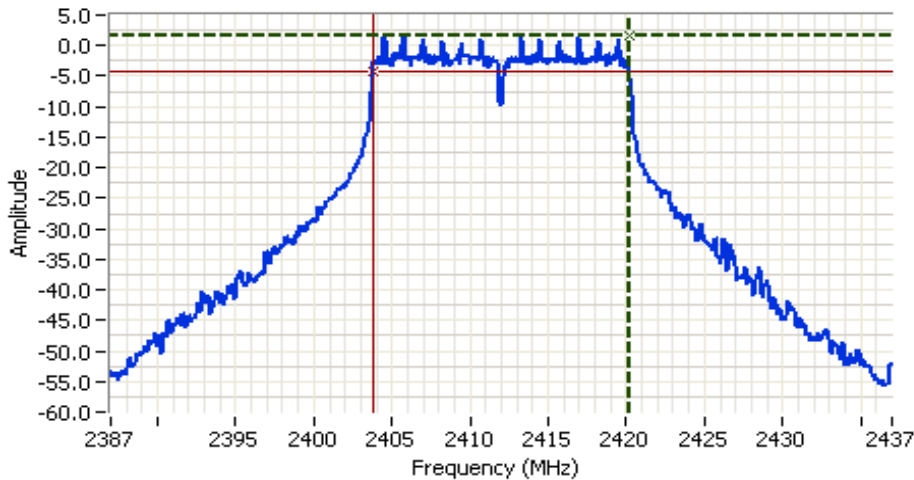
Delta Freq. 12.000

Delta Amplitude 6.00



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

g-mode

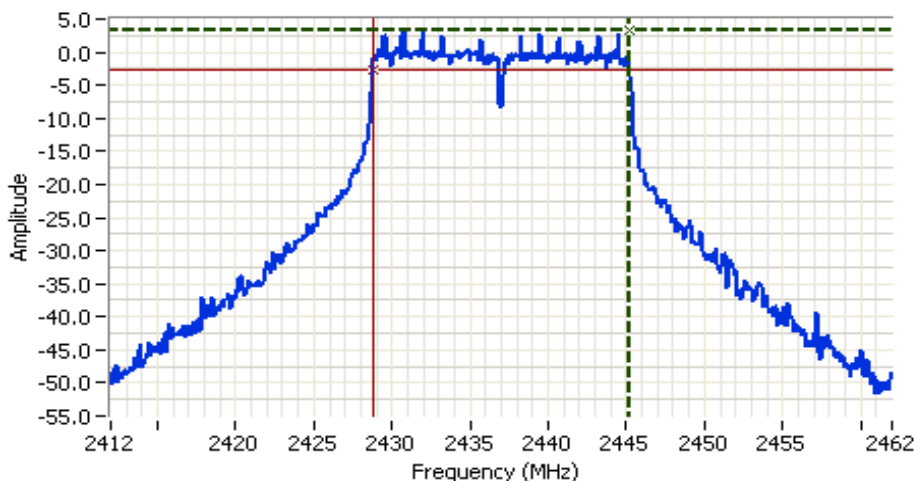


Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2412.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments
 6dB BW: 16.333 MHz
 channel 1

Cursor 1 2420.1667 1.61
 Cursor 2 2403.8333 -4.39

Delta Freq. 16.333
 Delta Amplitude 6.00



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2437.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

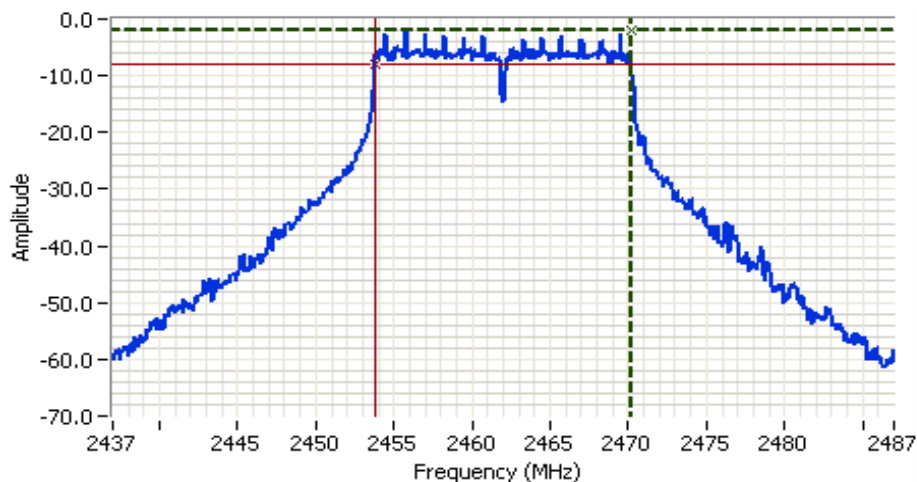
Comments
 6dB BW: 16.333 MHz
 channel 6

Cursor 1 2445.1667 3.37
 Cursor 2 2428.8333 -2.63

Delta Freq. 16.333
 Delta Amplitude 6.00



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 2462.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: POS
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments
 6dB BW: 16.333 MHz
 channel 11

Cursor 1	2470.1667	-2.02	
Cursor 2	2453.8333	-8.02	

Delta Freq. 16.333
 Delta Amplitude 6.00



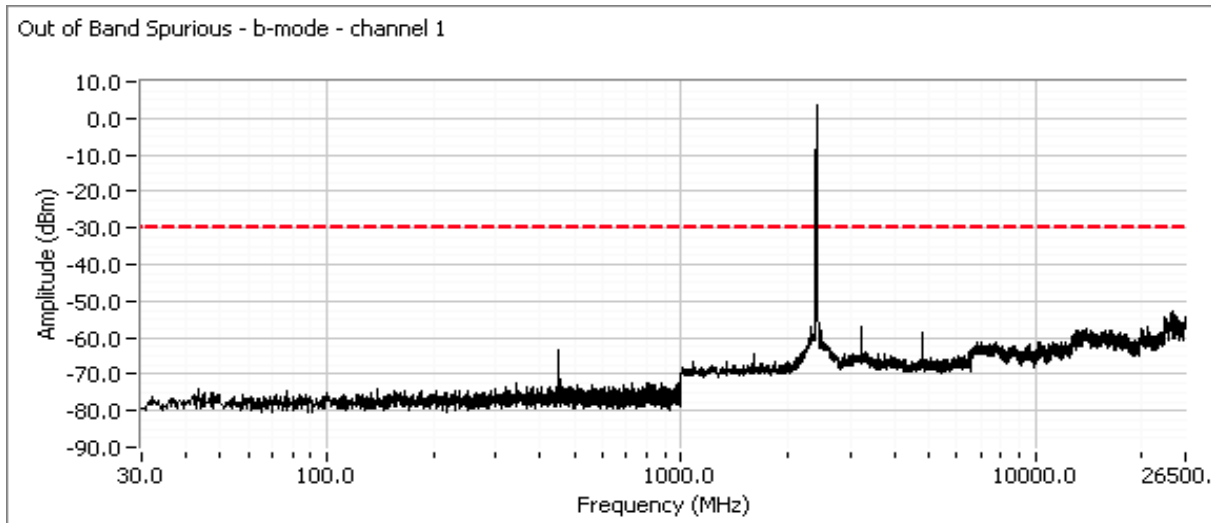
Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #4: Out of Band Spurious Emissions

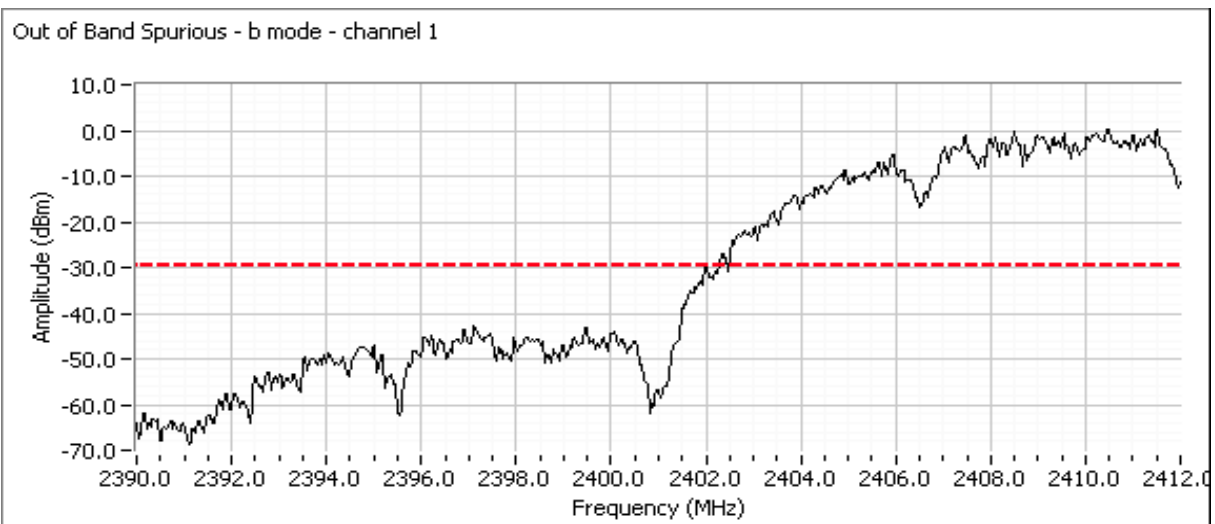
b-mode

Frequency (MHz)	Limit	Result
2412	-30dBc	Pass
2437	-30dBc	Pass
2462	-30dBc	Pass

Plots for low channel, power setting(s) = 2412

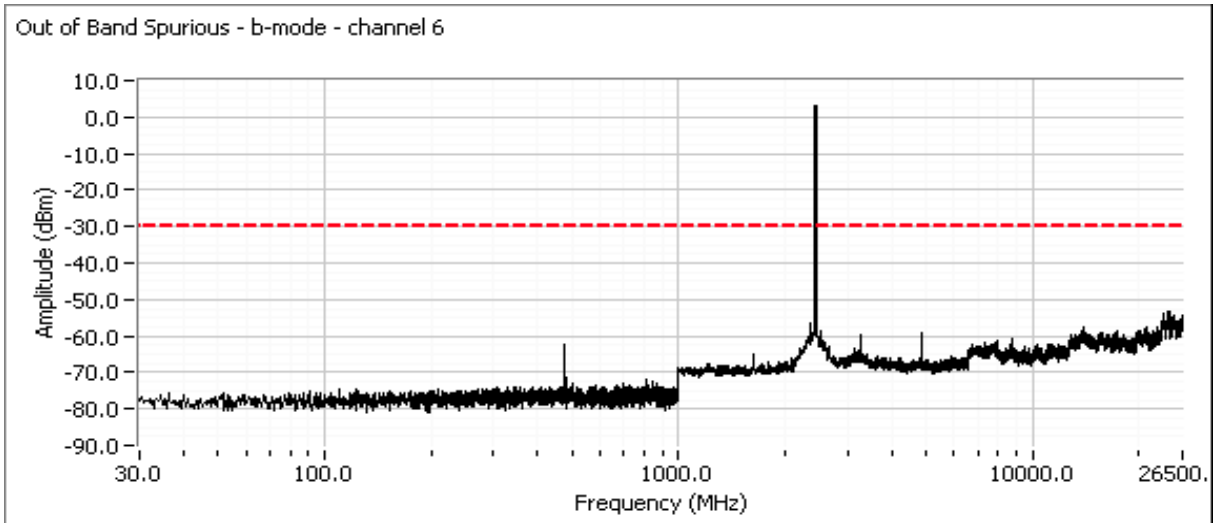


Additional plot showing compliance with -30dBc limit from 2390 MHz to 2400 MHz. Radiated measurements used to show compliance with the limits in the restricted band below 2390 MHz.

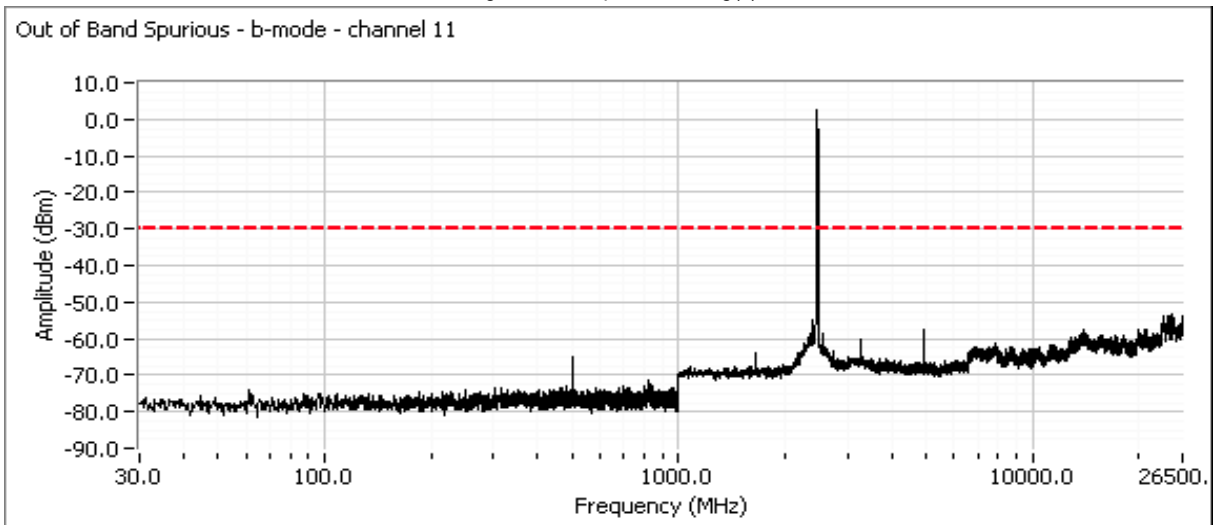


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Plots for center channel, power setting(s) = 2437



Plots for high channel, power setting(s) = 2462

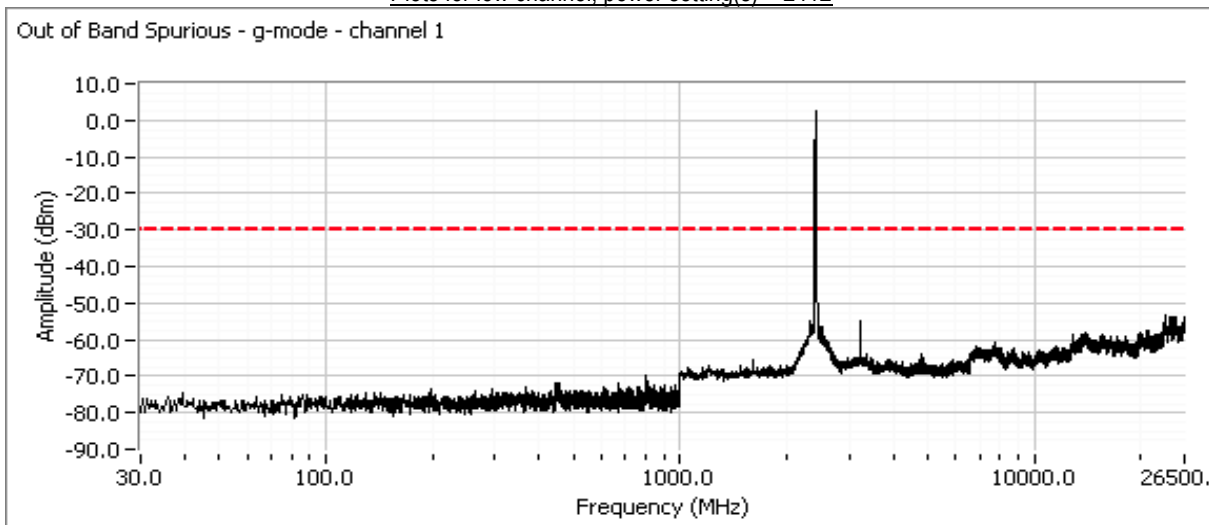


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

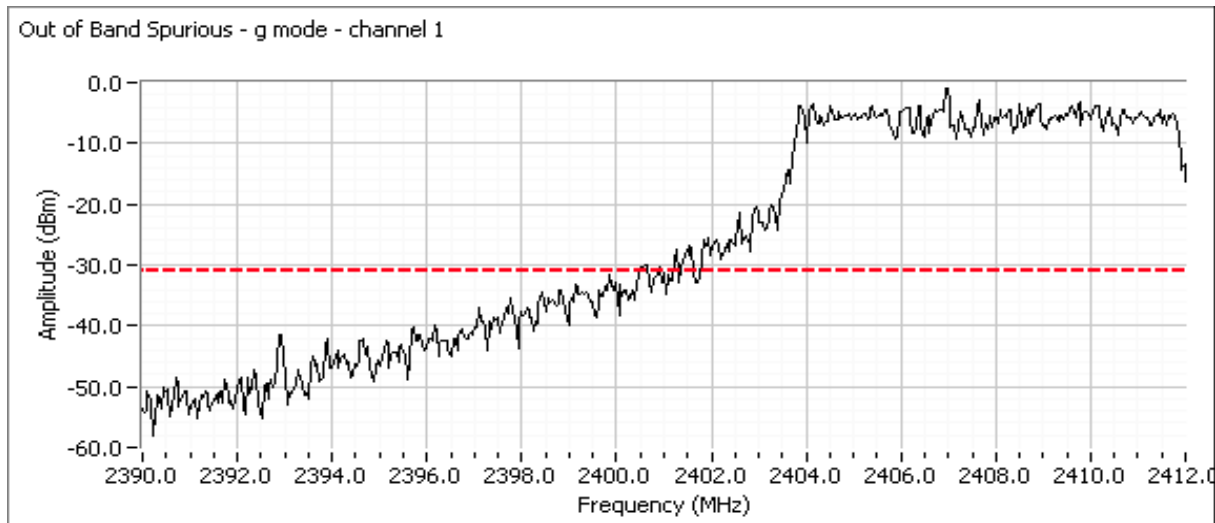
g-mode

Frequency (MHz)	Limit	Result
2412	-30dBc	Pass
2437	-30dBc	Pass
2462	-30dBc	Pass

Plots for low channel, power setting(s) = 2412

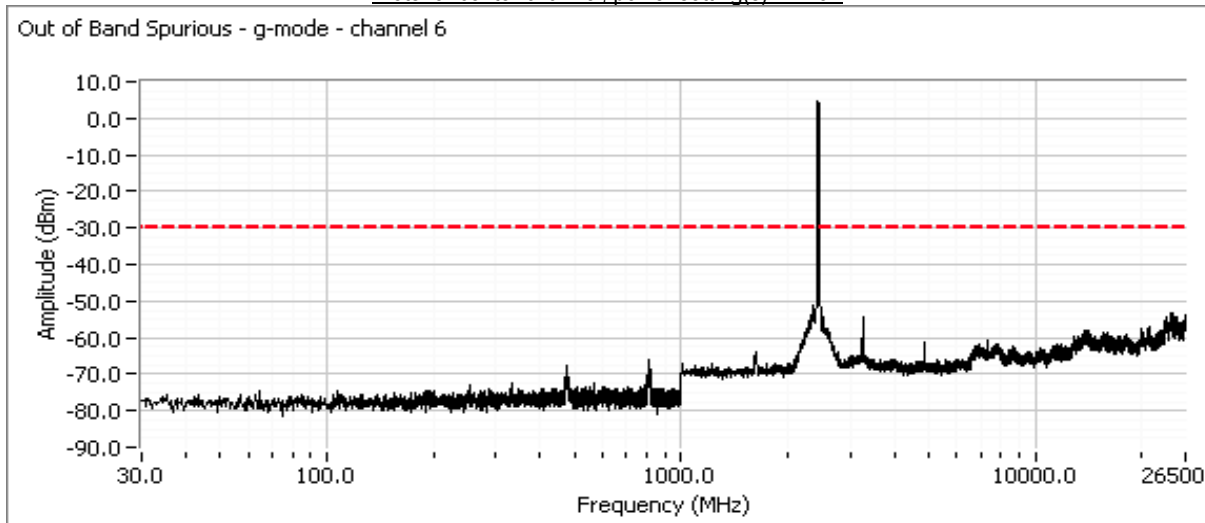


Additional plot showing compliance with -30dBc limit from 2390 MHz to 2400 MHz. Radiated measurements used to show compliance with the limits in the restricted band below 2390 MHz.

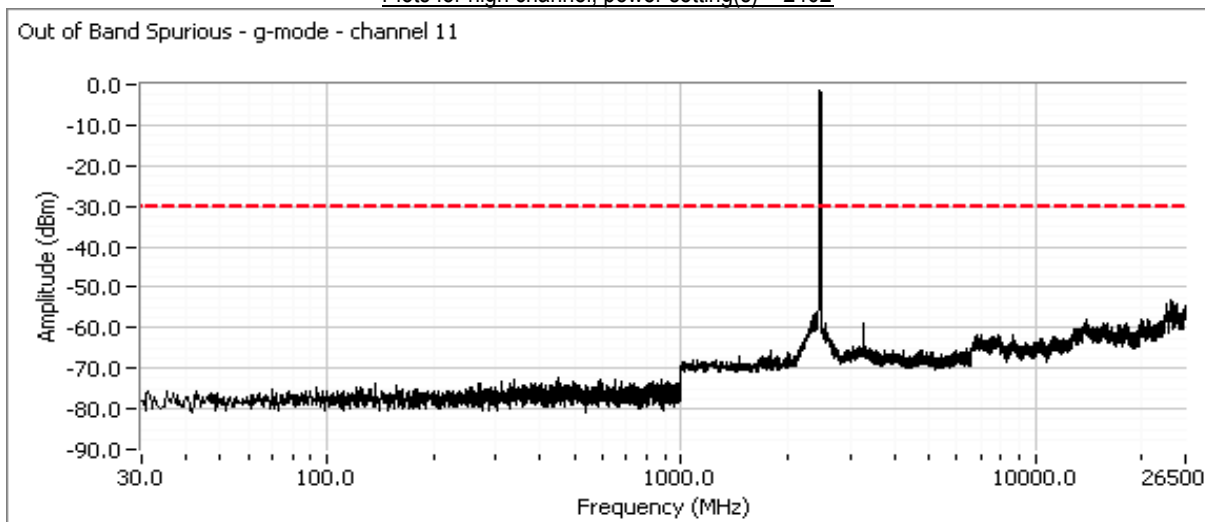


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Plots for center channel, power setting(s) = 2437



Plots for high channel, power setting(s) = 2462



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

**RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements
Power, PSD, Bandwidth and Spurious Emissions**

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 9/2/2010	Config. Used: 1
Test Engineer: Rafael Varelas	Config Change: none
Test Location: Fremont EMC Lab #4	EUT Voltage: 120V/60Hz

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on a single chain.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:

Temperature: 22.4 °C
Rel. Humidity: 43 %

Summary of Results

Run #	Pwr setting	Avg Pwr	Test Performed	Limit	Pass / Fail	Result / Margin
1	18	-	Output Power	15.247(b)	Pass	10.9 dBm
2	18	-	Power spectral Density (PSD)	15.247(d)	Pass	2.2 dBm/3kHz
3	18	-	Minimum 6dB Bandwidth	15.247(a)	Pass	16.3 MHz
3	18	-	99% Bandwidth	RSS GEN	-	16.9 MHz
4	18	-	Spurious emissions	15.247(b)	Pass	All emissions below the -30dBc limit

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

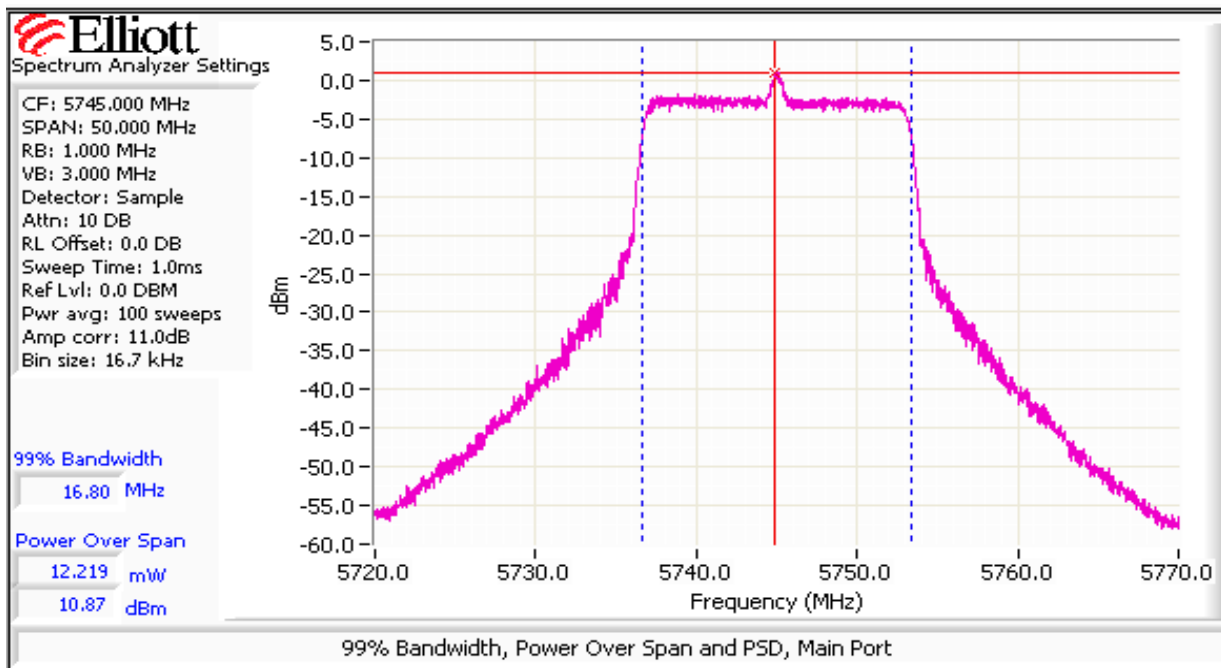
No deviations were made from the requirements of the standard.

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #1: Output Power

Power Setting ²	Frequency (MHz)	Output Power		Antenna Gain (dBi)	Result	EIRP ^{Note 2}		Output Power	
		(dBm) ¹	mW			dBm	W	(dBm) ³	mW
18	5745	10.9	12.3	5.0	Pass	15.9	0.039	10.5	11.2
18	5785	10.6	11.5	5.0	Pass	15.6	0.036	10.3	10.7
18	5825	10.6	11.5	5.0	Pass	15.6	0.036	10.8	12.0

- Note 1: Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over **40 MHz** (option #2, method 1 in KDB 558074, equivalent to method 1 of DA-02-2138A1 for U-NII devices). Spurious limit becomes **-30dBc**.
- Note 2: Power setting - the software power setting used during testing, included for reference only.
- Note 3: Power measured using average power meter and is included for reference only.

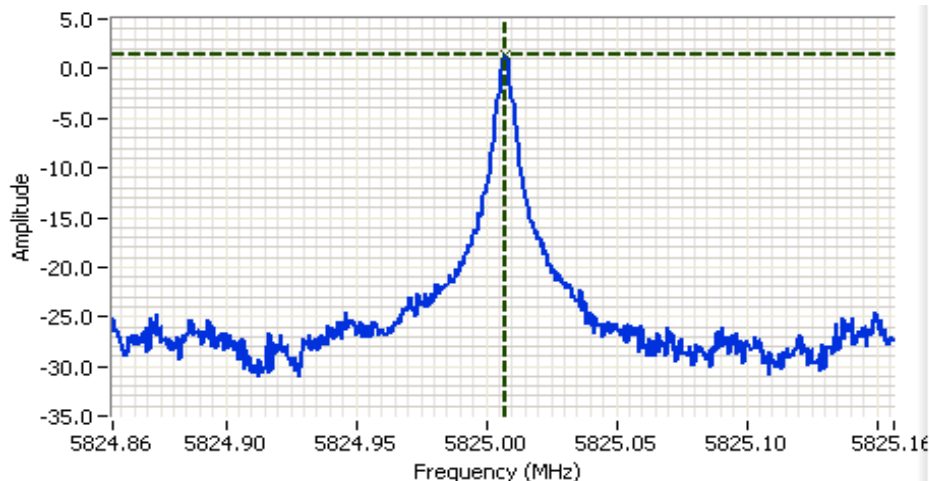


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #2: Power spectral Density

Power Setting	Frequency (MHz)	PSD	Limit dBm/3kHz	Result
		(dBm/3kHz) <small>Note 1</small>		
18	5745	1.2	8.0	Pass
18	5785	2.2	8.0	Pass
18	5825	1.4	8.0	Pass

Note 1: Power spectral density measured using RB=3 kHz, VB=10kHz, analyzer with peak detector and with a sweep time set to ensure a dwell time of at least 1 second per 3kHz. The measurement is made at the frequency of PPSD determined from preliminary scans using RB=3kHz using multiple sweeps at a faster rate over the 6dB bandwidth of the signal.



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 5825.007 MHz
 SPAN: 300 kHz
 RB: 3.00 kHz
 VB: 10.0 kHz
 Detector: Normal
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 100.0s
 Ref Lvl: 11.0 DBM

Comments

PSD @ 5825 MHz
 Main Port

Cursor 1	5825.0075	1.36	
	0.0000	0.00	

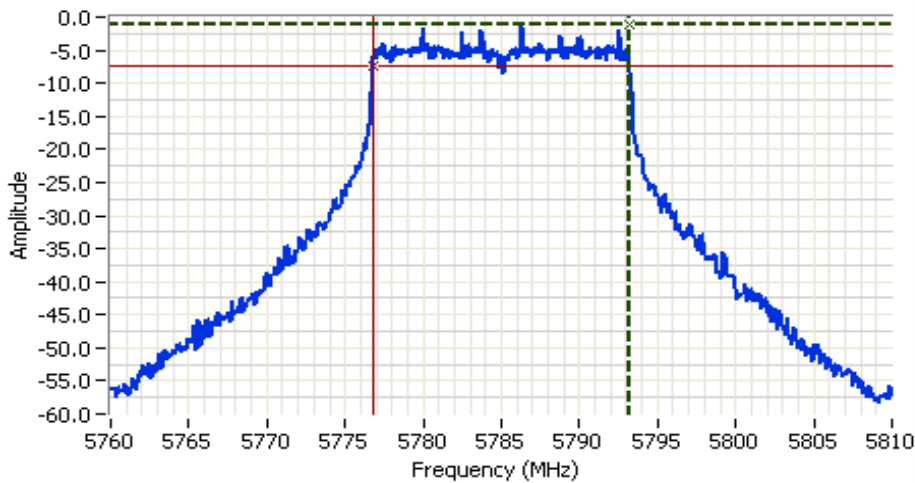


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Run #3: Signal Bandwidth

Power Setting	Frequency (MHz)	Resolution Bandwidth	Bandwidth (MHz)	
			6dB	99%
18	5745	100kHz	16.3	16.8
18	5785	100kHz	16.3	16.8
18	5825	100kHz	16.3	16.9

Note 1: 99% bandwidth measured in accordance with RSS GEN, with RB > 1% of the span and VB > 3xRB



Analyzer Settings
 Agilent Technologies, E4446A
 CF: 5785.000 MHz
 SPAN: 50.000 MHz
 RB: 100 kHz
 VB: 100 kHz
 Detector: Normal
 Attn: 10 DB
 RL Offset: 11.0 DB
 Sweep Time: 6.0ms
 Ref Lvl: 11.0 DBM

Comments
 6dB BW: 16.333 MHz
 Main Port

Cursor 1	5793.1667	-1.28	⊕ ⊖	Delta Freq.	16.333
Cursor 2	5776.8333	-7.28	⊕ ⊖	Delta Amplitude	6.00

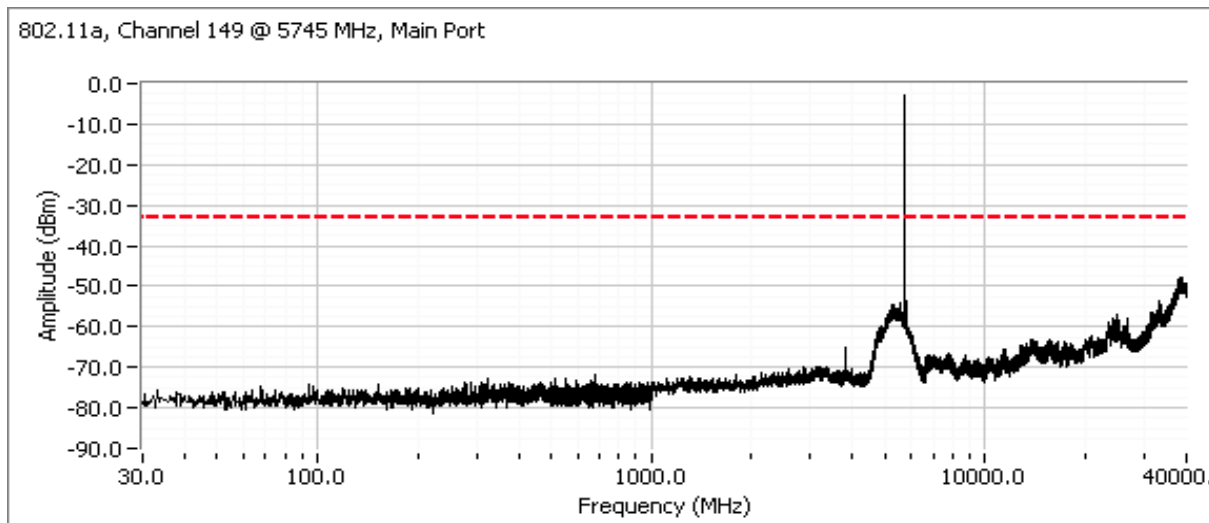


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

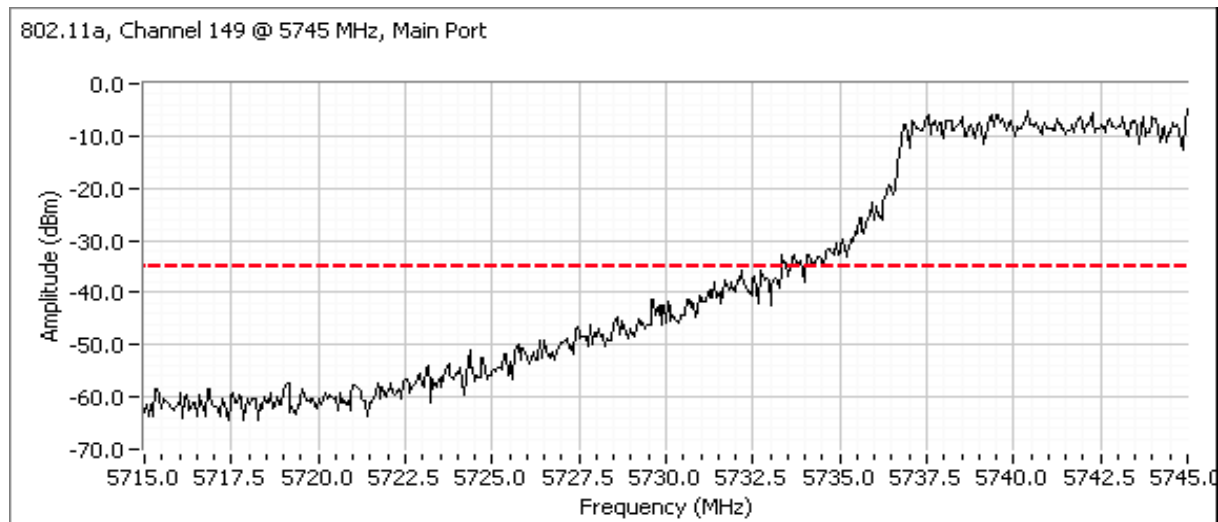
Run #4: Out of Band Spurious Emissions

Frequency (MHz)	Limit	Result
5745	-30dBc	Pass
5785	-30dBc	Pass
5825	-30dBc	Pass

Plots for low channel, power setting(s) = 18

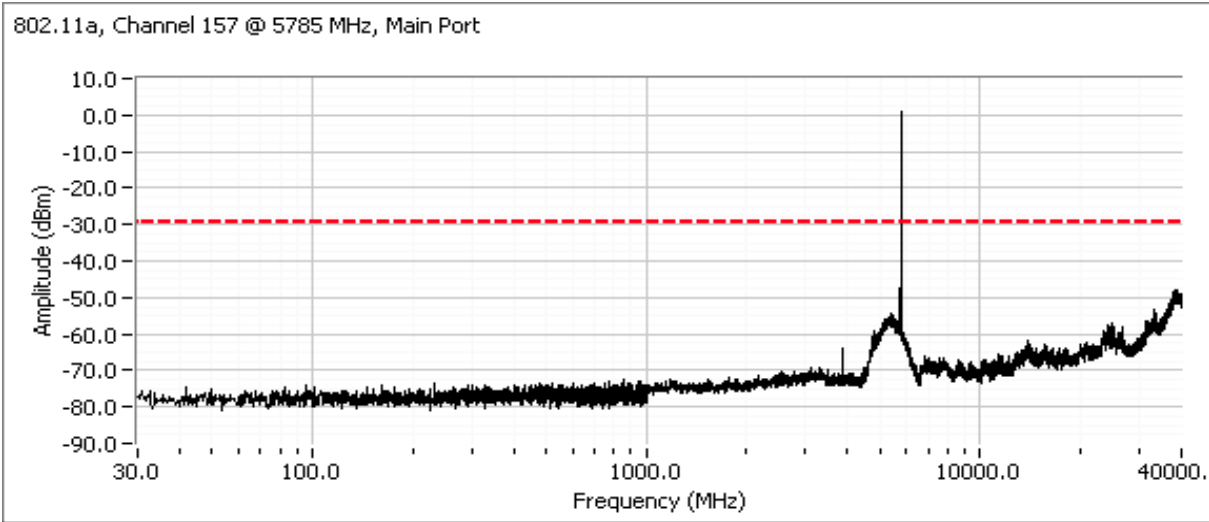


Additional plot from 5715 - 5755 MHz showing compliance with -30dBc at the band edge.

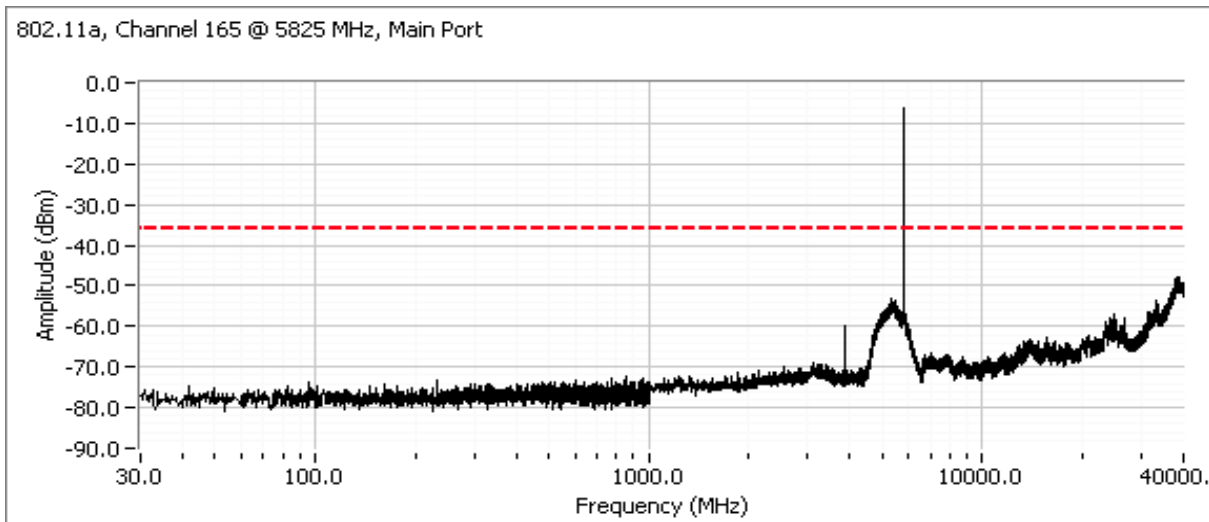


Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Plots for center channel, power setting(s) = 18

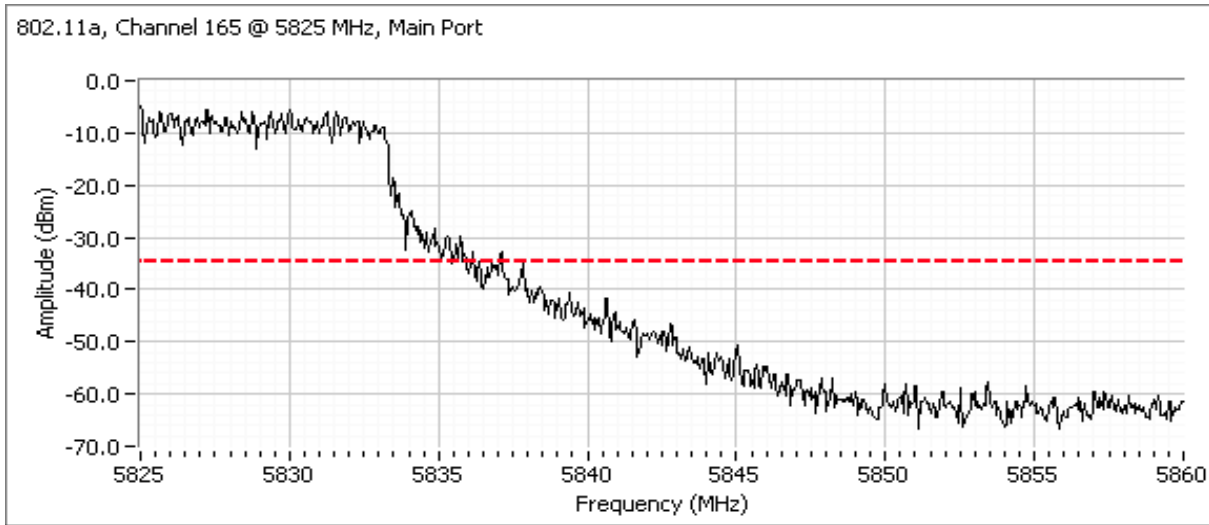


Plots for high channel, power setting(s) = 18



Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel with Intercom, MVP-TDS-9 Docking Station and TBD Docking Station	T-Log Number:	T80241
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC 15.247/15E, RSS210, EN 300 328 v1.7.1, EN 301 893 V1.5.1.	Class:	N/A

Additional plot from 5820 - 5860 MHz showing compliance with -30dBc at the band edge.





EMC Test Data

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		-
Emissions Standard(s):	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B
Immunity Standard(s):	EN 301 489-17, EN 301 489-1v1.8.1, EN 55024	Environment:	-

EMC Test Data

For The

AMX

Model

MVP-9000i Modero Wireless Touch Panel

Date of Last Test: 9/16/2010

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
		Account Manager:	Christine Krebill
Contact:	Heath Sharp		
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

Conducted Emissions

(Elliott Laboratories Fremont Facility, Semi-Anechoic Chamber)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 8/21/2010
 Test Engineer: Riaz Momand
 Test Location: Fremont Chamber # 3

Config. Used: 1
 Config Change: None
 EUT Voltage: Refer to individual run

General Test Configuration

For tabletop equipment, the EUT was located on a wooden table inside the semi-anechoic chamber, 40 cm from a vertical coupling plane and 80cm from the LISN. A second LISN was used for all local support equipment. Remote support equipment was located inside the semi-anechoic chamber away from the antenna to establish wireless connection to the EUT.

Ambient Conditions: Temperature: 22 °C
 Rel. Humidity: 44 %

Summary of Results

Run #	Test Performed	Limit	Result	Margin
1	CE, AC Power, 230V / 50Hz	Class B	Pass	42.5dBµV @ 3.557MHz (-3.5dB)
2	CE, AC Power, 120V / 60Hz	Class B	Pass	39.8dBµV @ 3.621MHz (-6.2dB)
3	CE, AC Power, 100V / 50Hz	Class B	Pass	39.2dBµV @ 4.025MHz (-6.8dB)

Modifications Made During Testing

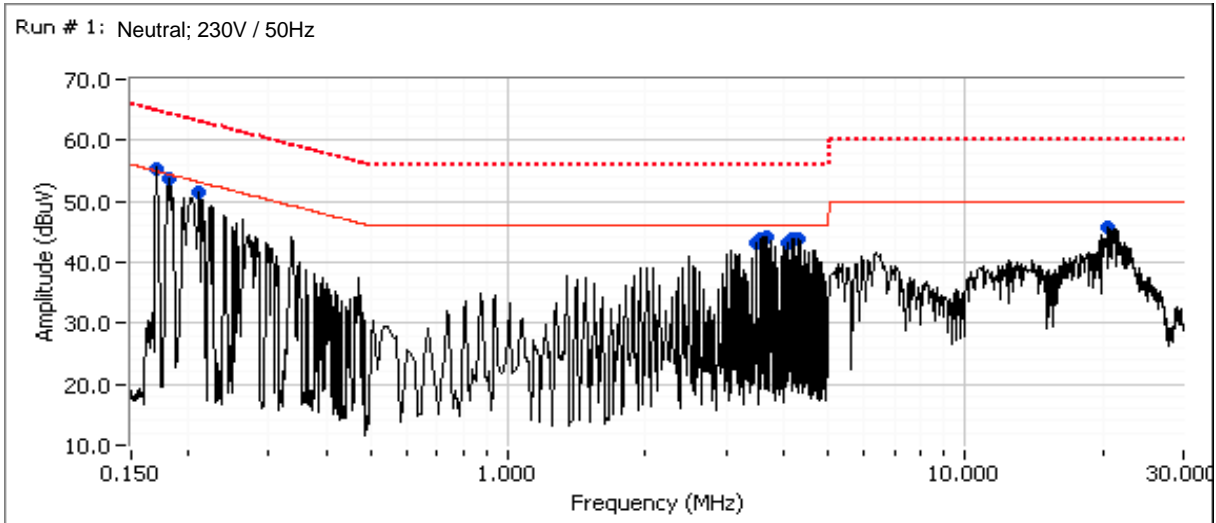
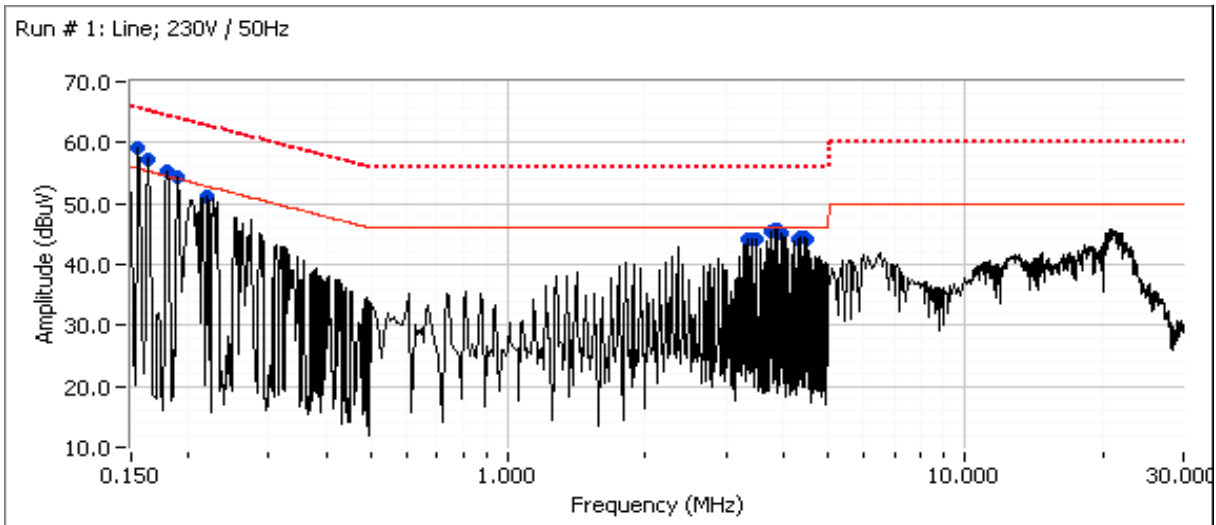
No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Client: AMX	Job Number: J80082
Model: MVP-9000i Modero Wireless Touch Panel	T-Log Number: T80309
Contact: Heath Sharp	Account Manager: Christine Krebill
Standard: FCC, VCCI, EN 55022, EN 301 489-17	Class: B

Run # 1: AC Power Port Conducted Emissions, 0.15 - 30MHz, 230V / 50Hz



Run # 1 Continued on Next Page

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

..... Run # 1 Continued

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
0.156	59.0	Line	55.7	3.3	Peak	
0.161	57.3	Line	55.3	2.0	Peak	
0.174	55.3	Line	54.5	0.8	Peak	
0.183	54.4	Line	54.1	0.3	Peak	
0.213	51.3	Line	52.8	-1.5	Peak	
3.423	44.1	Line	46.0	-1.9	Peak	
3.490	44.2	Line	46.0	-1.8	Peak	
3.557	44.0	Line	46.0	-2.0	Peak	
3.691	45.5	Line	46.0	-0.5	Peak	
3.893	45.6	Line	46.0	-0.4	Peak	
3.959	45.7	Line	46.0	-0.3	Peak	
4.027	45.2	Line	46.0	-0.8	Peak	
4.228	44.0	Line	46.0	-2.0	Peak	
4.361	44.4	Line	46.0	-1.6	Peak	
0.164	55.2	Neutral	55.0	0.2	Peak	
0.175	53.7	Neutral	54.4	-0.7	Peak	
0.203	51.4	Neutral	53.2	-1.8	Peak	
3.556	43.2	Neutral	46.0	-2.8	Peak	
3.623	43.9	Neutral	46.0	-2.1	Peak	
3.690	44.2	Neutral	46.0	-1.8	Peak	
4.159	43.3	Neutral	46.0	-2.7	Peak	
4.226	43.7	Neutral	46.0	-2.3	Peak	
4.293	43.9	Neutral	46.0	-2.1	Peak	
4.360	43.8	Neutral	46.0	-2.2	Peak	
20.993	45.7	Neutral	50.0	-4.3	Peak	

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
3.557	42.5	Line	46.0	-3.5	AVG	AVG (0.10s)
3.691	42.5	Line	46.0	-3.5	AVG	AVG (0.10s)
4.360	41.7	Neutral	46.0	-4.3	AVG	AVG (0.10s)
3.690	41.6	Neutral	46.0	-4.4	AVG	AVG (0.10s)
4.293	41.6	Neutral	46.0	-4.4	AVG	AVG (0.10s)
4.027	41.5	Line	46.0	-4.5	AVG	AVG (0.10s)
3.490	41.3	Line	46.0	-4.7	AVG	AVG (0.10s)

Run # 1 Continued on Next Page

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

..... Run # 1 Continued

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
4.228	41.1	Line	46.0	-4.9	AVG	AVG (0.10s)
4.226	40.9	Neutral	46.0	-5.1	AVG	AVG (0.10s)
4.159	40.4	Neutral	46.0	-5.6	AVG	AVG (0.10s)
3.959	40.1	Line	46.0	-5.9	AVG	AVG (0.10s)
3.623	39.4	Neutral	46.0	-6.6	AVG	AVG (0.10s)
3.893	36.8	Line	46.0	-9.2	AVG	AVG (0.10s)
3.423	36.2	Line	46.0	-9.8	AVG	AVG (0.10s)
4.361	36.2	Line	46.0	-9.8	AVG	AVG (0.10s)
3.556	35.2	Neutral	46.0	-10.8	AVG	AVG (0.10s)
3.557	44.4	Line	56.0	-11.6	QP	QP (1.00s)
20.993	37.9	Neutral	50.0	-12.1	AVG	AVG (0.10s)
3.691	43.7	Line	56.0	-12.3	QP	QP (1.00s)
3.690	43.7	Neutral	56.0	-12.3	QP	QP (1.00s)
4.360	43.6	Neutral	56.0	-12.4	QP	QP (1.00s)
3.490	43.5	Line	56.0	-12.5	QP	QP (1.00s)
4.027	43.4	Line	56.0	-12.6	QP	QP (1.00s)
4.293	43.0	Neutral	56.0	-13.0	QP	QP (1.00s)
3.959	42.8	Line	56.0	-13.2	QP	QP (1.00s)
4.228	42.6	Line	56.0	-13.4	QP	QP (1.00s)
3.623	42.6	Neutral	56.0	-13.4	QP	QP (1.00s)
4.226	42.3	Neutral	56.0	-13.7	QP	QP (1.00s)
0.156	51.2	Line	65.7	-14.5	QP	QP (1.00s)
3.423	41.5	Line	56.0	-14.5	QP	QP (1.00s)
4.159	41.3	Neutral	56.0	-14.7	QP	QP (1.00s)
0.161	50.5	Line	65.4	-14.9	QP	QP (1.00s)
20.993	44.9	Neutral	60.0	-15.1	QP	QP (1.00s)
0.203	48.2	Neutral	63.5	-15.3	QP	QP (1.00s)
3.556	40.4	Neutral	56.0	-15.6	QP	QP (1.00s)
0.174	48.9	Line	64.8	-15.9	QP	QP (1.00s)
3.893	40.1	Line	56.0	-15.9	QP	QP (1.00s)
4.361	40.0	Line	56.0	-16.0	QP	QP (1.00s)
0.164	48.9	Neutral	65.3	-16.4	QP	QP (1.00s)
0.183	47.7	Line	64.3	-16.6	QP	QP (1.00s)
0.175	47.5	Neutral	64.7	-17.2	QP	QP (1.00s)
0.213	44.5	Line	63.1	-18.6	QP	QP (1.00s)
0.203	33.1	Neutral	53.5	-20.4	AVG	AVG (0.10s)

Run # 1 Continued on Next Page

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

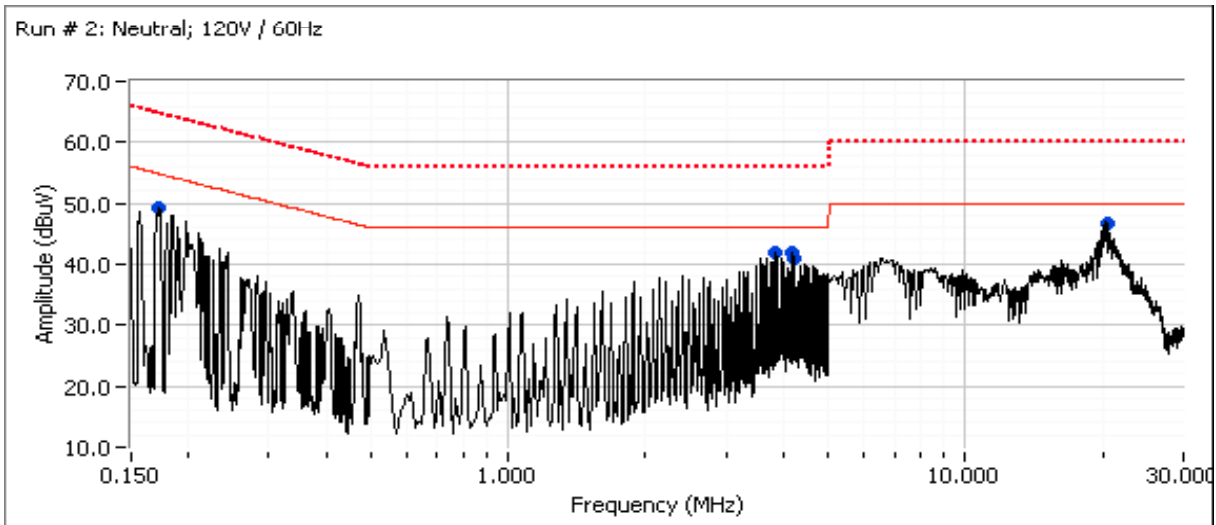
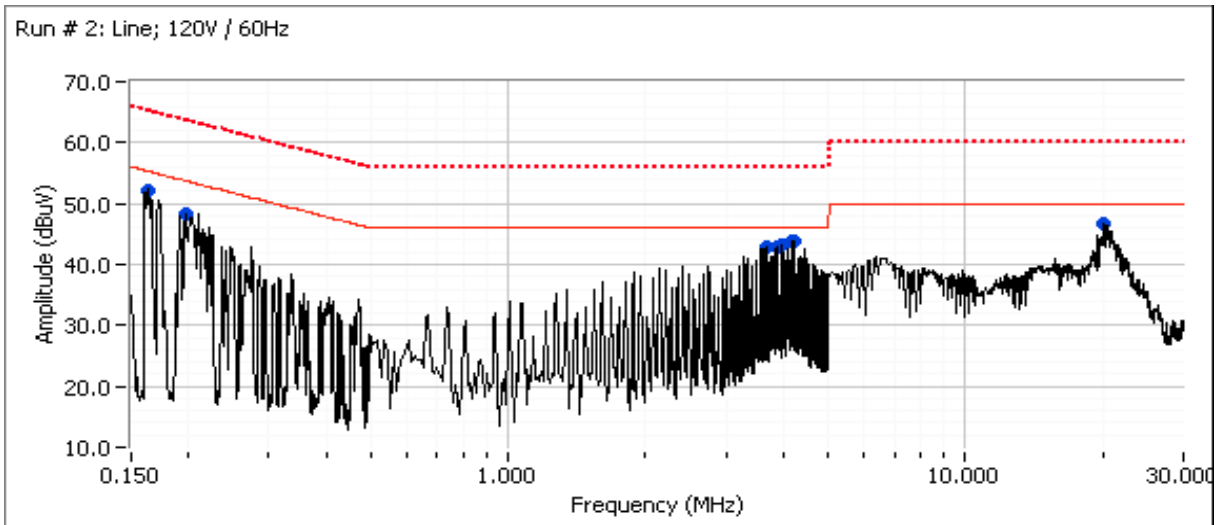
..... Run # 1 Continued

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
0.156	21.4	Line	55.7	-34.3	AVG	AVG (0.10s)
0.161	20.4	Line	55.4	-35.0	AVG	AVG (0.10s)
0.183	19.1	Line	54.3	-35.2	AVG	AVG (0.10s)
0.174	19.3	Line	54.8	-35.5	AVG	AVG (0.10s)
0.213	17.6	Line	53.1	-35.5	AVG	AVG (0.10s)
0.175	18.8	Neutral	54.7	-35.9	AVG	AVG (0.10s)
0.164	19.2	Neutral	55.3	-36.1	AVG	AVG (0.10s)

Client: AMX	Job Number: J80082
Model: MVP-9000i Modero Wireless Touch Panel	T-Log Number: T80309
Contact: Heath Sharp	Account Manager: Christine Krebill
Standard: FCC, VCCI, EN 55022, EN 301 489-17	Class: B

Run # 2: AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V / 60Hz



Run # 2 Continued on Next Page

Client: AMX	Job Number: J80082
Model: MVP-9000i Modero Wireless Touch Panel	T-Log Number: T80309
	Account Manager: Christine Krebill
Contact: Heath Sharp	
Standard: FCC, VCCI, EN 55022, EN 301 489-17	Class: B

..... Run # 2 Continued

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
0.160	52.1	Line	55.3	-3.2	Peak	
0.201	48.4	Line	53.7	-5.3	Peak	
3.621	43.0	Line	46.0	-3.0	Peak	
3.891	43.0	Line	46.0	-3.0	Peak	
3.958	43.2	Line	46.0	-2.8	Peak	
4.226	43.9	Line	46.0	-2.1	Peak	
4.226	43.8	Line	46.0	-2.2	Peak	
20.456	46.7	Line	50.0	-3.3	Peak	
0.166	49.3	Neutral	54.8	-5.5	Peak	
3.823	42.0	Neutral	46.0	-4.0	Peak	
4.159	42.0	Neutral	46.0	-4.0	Peak	
4.159	41.1	Neutral	46.0	-4.9	Peak	
20.258	46.8	Neutral	50.0	-3.2	Peak	

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
3.621	39.8	Line	46.0	-6.2	AVG	AVG (0.10s)
3.891	39.8	Line	46.0	-6.2	AVG	AVG (0.10s)
4.226	39.6	Line	46.0	-6.4	AVG	AVG (0.10s)
4.226	39.6	Line	46.0	-6.4	AVG	AVG (0.10s)
3.958	38.9	Line	46.0	-7.1	AVG	AVG (0.10s)
4.159	38.5	Neutral	46.0	-7.5	AVG	AVG (0.10s)
4.159	38.4	Neutral	46.0	-7.6	AVG	AVG (0.10s)
3.823	37.4	Neutral	46.0	-8.6	AVG	AVG (0.10s)
3.958	42.7	Line	56.0	-13.3	QP	QP (1.00s)
4.226	42.4	Line	56.0	-13.6	QP	QP (1.00s)
4.226	42.4	Line	56.0	-13.6	QP	QP (1.00s)
3.891	42.0	Line	56.0	-14.0	QP	QP (1.00s)
3.621	41.9	Line	56.0	-14.1	QP	QP (1.00s)
20.456	35.3	Line	50.0	-14.7	AVG	AVG (0.10s)
3.823	41.2	Neutral	56.0	-14.8	QP	QP (1.00s)
4.159	41.2	Neutral	56.0	-14.8	QP	QP (1.00s)
4.159	41.2	Neutral	56.0	-14.8	QP	QP (1.00s)

Run # 2 Continued on Next Page

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

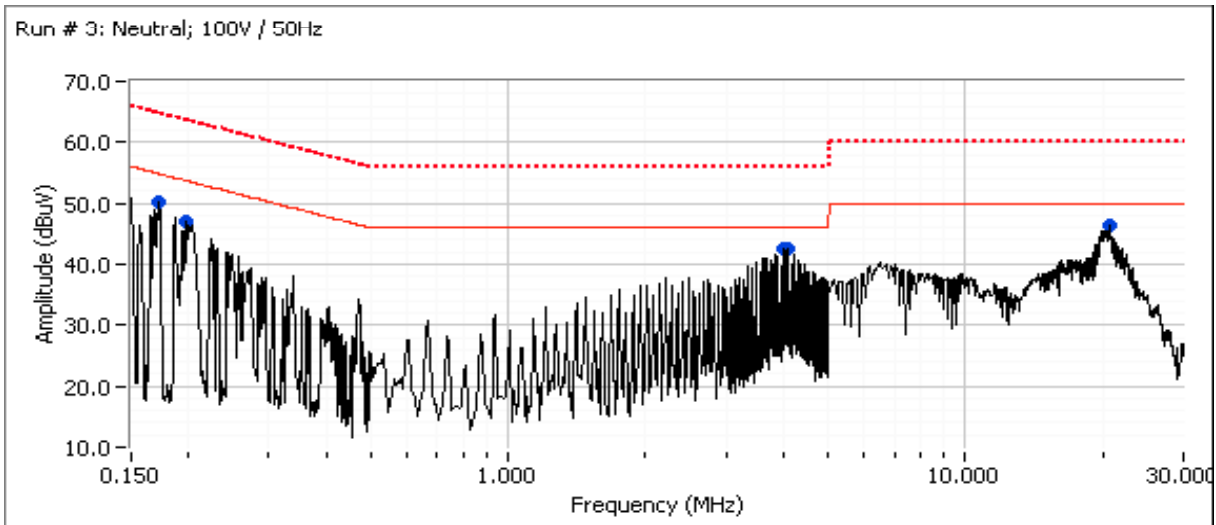
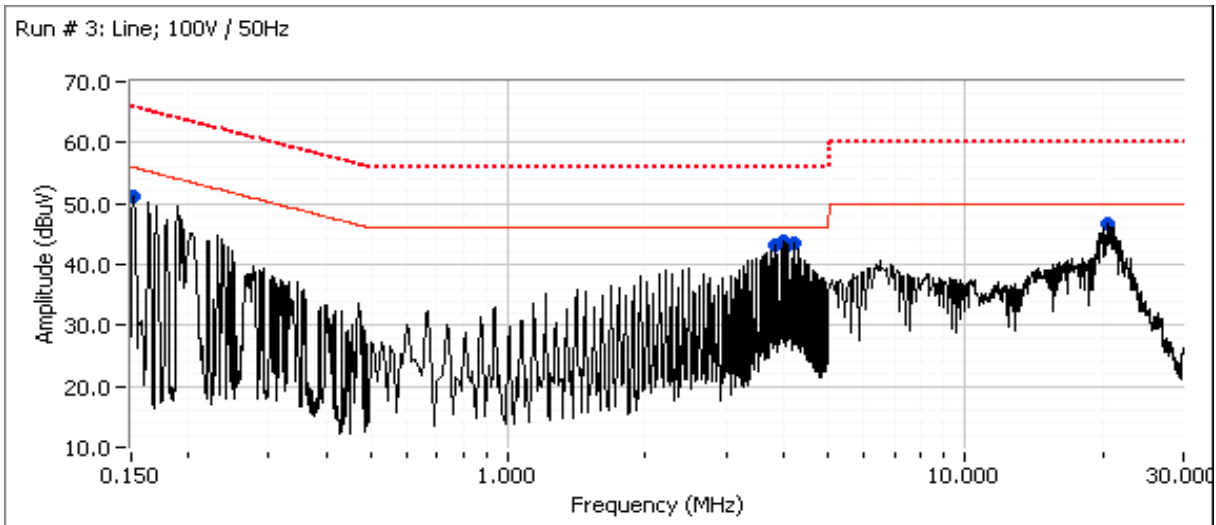
..... Run # 2 Continued

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
20.258	33.7	Neutral	50.0	-16.3	AVG	AVG (0.10s)
0.201	47.0	Line	63.6	-16.6	QP	QP (1.00s)
20.456	43.3	Line	60.0	-16.7	QP	QP (1.00s)
20.258	41.9	Neutral	60.0	-18.1	QP	QP (1.00s)
0.160	45.4	Line	65.5	-20.1	QP	QP (1.00s)
0.201	32.5	Line	53.6	-21.1	AVG	AVG (0.10s)
0.166	43.2	Neutral	65.2	-22.0	QP	QP (1.00s)
0.160	17.9	Line	55.5	-37.6	AVG	AVG (0.10s)
0.166	16.5	Neutral	55.2	-38.7	AVG	AVG (0.10s)

Client: AMX	Job Number: J80082
Model: MVP-9000i Modero Wireless Touch Panel	T-Log Number: T80309
Contact: Heath Sharp	Account Manager: Christine Krebill
Standard: FCC, VCCI, EN 55022, EN 301 489-17	Class: B

Run # 3: AC Power Port Conducted Emissions, 0.15 - 30MHz, 100V / 50Hz



Run # 2 Continued on Next Page

Client:	AMX	Job Number:	J80082
Model:	MVP-9000i Modero Wireless Touch Panel	T-Log Number:	T80309
Contact:	Heath Sharp	Account Manager:	Christine Krebill
Standard:	FCC, VCCI, EN 55022, EN 301 489-17	Class:	B

..... Run # 2 Continued

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
0.151	51.1	Line	55.9	-4.8	Peak	
3.824	43.2	Line	46.0	-2.8	Peak	
4.025	43.8	Line	46.0	-2.2	Peak	
4.026	43.3	Line	46.0	-2.7	Peak	
4.226	43.5	Line	46.0	-2.5	Peak	
20.526	46.8	Line	50.0	-3.2	Peak	
0.166	50.2	Neutral	54.9	-4.7	Peak	
0.202	47.0	Neutral	53.7	-6.7	Peak	
4.025	42.5	Neutral	46.0	-3.5	Peak	
4.093	42.4	Neutral	46.0	-3.6	Peak	
20.462	46.3	Neutral	50.0	-3.7	Peak	

Final quasi-peak and average readings

Frequency MHz	Level dB μ V	AC Line	Class B		Detector QP/Ave	Comments
			Limit	Margin		
4.025	39.2	Line	46.0	-6.8	AVG	AVG (0.10s)
3.824	39.0	Line	46.0	-7.0	AVG	AVG (0.10s)
4.226	38.7	Line	46.0	-7.3	AVG	AVG (0.10s)
4.026	38.6	Line	46.0	-7.4	AVG	AVG (0.10s)
4.025	37.2	Neutral	46.0	-8.8	AVG	AVG (0.10s)
4.093	37.0	Neutral	46.0	-9.0	AVG	AVG (0.10s)
4.025	43.1	Line	56.0	-12.9	QP	QP (1.00s)
4.026	42.7	Line	56.0	-13.3	QP	QP (1.00s)
20.526	36.3	Line	50.0	-13.7	AVG	AVG (0.10s)
3.824	42.2	Line	56.0	-13.8	QP	QP (1.00s)
4.226	42.2	Line	56.0	-13.8	QP	QP (1.00s)
4.025	41.5	Neutral	56.0	-14.5	QP	QP (1.00s)
20.462	35.5	Neutral	50.0	-14.5	AVG	AVG (0.10s)
4.093	41.0	Neutral	56.0	-15.0	QP	QP (1.00s)
20.526	44.3	Line	60.0	-15.7	QP	QP (1.00s)
20.462	42.9	Neutral	60.0	-17.1	QP	QP (1.00s)
0.202	45.8	Neutral	63.5	-17.7	QP	QP (1.00s)
0.151	46.3	Line	65.9	-19.6	QP	QP (1.00s)
0.202	33.4	Neutral	53.5	-20.1	AVG	AVG (0.10s)
0.166	43.0	Neutral	65.2	-22.2	QP	QP (1.00s)
0.151	19.0	Line	55.9	-36.9	AVG	AVG (0.10s)
0.166	16.1	Neutral	55.2	-39.1	AVG	AVG (0.10s)